

SCREENING SITE INSPECTION REPORT
FOR
COMERCO, INC., OLYMPIC STAIN DIVISION
BATAVIA, ILLINOIS
U.S. EPA ID: ILD085224186
SS ID: NONE
TDD: F05-8711-048
PAN: FILO129SB

EPA Region 5 Records Ctr.



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DECEMBER 19, 1989



ecology and environment, inc.

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1. INTRODUCTION

Ecology and Environment, Inc., Field Investigation Team (FIT) was tasked by the United States Environmental Protection Agency (U.S. EPA) to conduct a screening site inspection (SSI) of the Comerco, Inc., Olympic Stain Division (Olympic) site under contract number 68-01-7347.

The site was initially discovered by U.S. EPA through the filing by Olympic Stain of a Notification of Hazardous Waste Site form pursuant to Section 103(c) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The 103(c) form was filed by Olympic Stain on May 13, 1986, as a result of hazardous waste storage on-site between 1977 and 1981. The site was evaluated in the form of a preliminary assessment (PA) that was submitted to U.S. EPA. The PA was prepared by Paul D. Shea of FIT on March 7, 1983.

FIT prepared an SSI work plan for the Olympic site under technical directive document (TDD) F05-8711-048, issued on November 16, 1987. The SSI work plan was approved by U.S. EPA on September 26, 1988. The SSI of the Olympic site was conducted on February 7, 1989, under TDD F05-8711-048, issued on September 26, 1988.

The FIT SSI included an interview with site representatives, a reconnaissance inspection of the site, and the collection of seven soil samples.

The purposes of an SSI have been stated by U.S. EPA in a directive outlining Pre-Remedial Program strategies. The directive states:

All sites will receive a screening SI to 1) collect additional data beyond the PA to enable a more refined

preliminary HRS [Hazard Ranking System] score, 2) establish priorities among sites most likely to qualify for the NPL [National Priorities List], and 3) identify the most critical data requirements for the listing SI step. A screening SI will not have rigorous data quality objectives (DQOs). Based on the refined preliminary HRS score and other technical judgement factors, the site will then either be designated as NFRAP [no further remedial action planned], or carried forward as an NPL listing candidate. A listing SI will not automatically be done on these sites, however. First, they will go through a management evaluation to determine whether they can be addressed by another authority such as RCRA [Resource Conservation and Recovery Act].... Sites that are designated NFRAP or deferred to other statutes are not candidates for a listing SI.

The listing SI will address all the data requirements of the revised HRS using field screening and NPL level DQOs. It may also provide needed data in a format to support remedial investigation work plan development. Only sites that appear to score high enough for listing and that have not been deferred to another authority will receive a listing SI. (U.S. EPA 1988)

U.S. EPA Region V has also instructed FIT to identify sites during the SSI that may require removal action to remediate an immediate human health or environmental threat.

2. SITE BACKGROUND

2.1 INTRODUCTION

This section includes information obtained from SSI work plan preparation and the site representative interview.

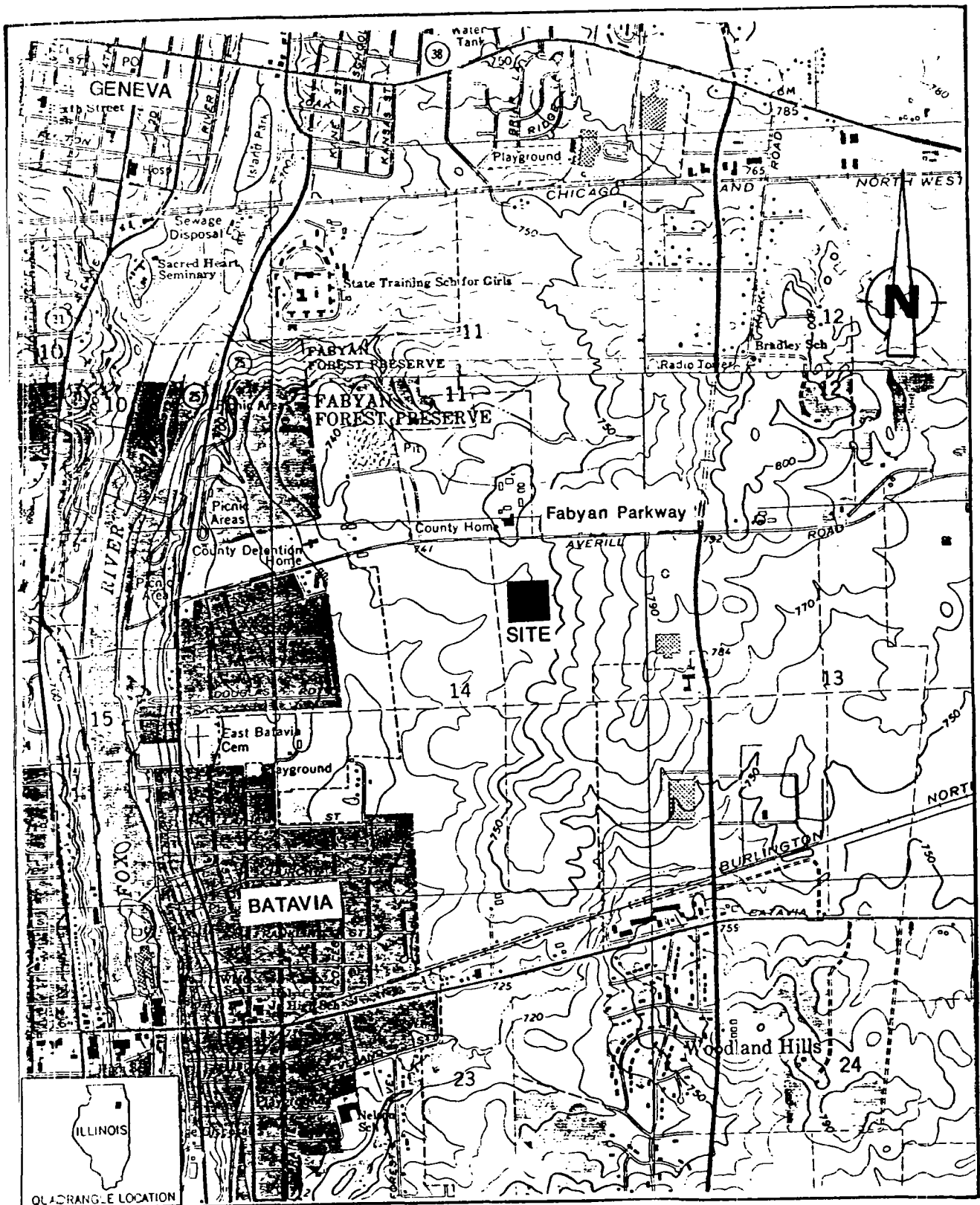
2.2 SITE DESCRIPTION

The Comerco, Inc., Olympic Stain Division site is an active facility currently manufacturing water-based paints. The site encompasses approximately 5 1/4 acres and is located in Batavia, Illinois, Kane County (NW1/4NE1/4 sec. 14, T.39N., R.8E.). The site facility address is 1020 Olympic Drive in Batavia (see Figure 2-1). The area surrounding the site consists mainly of industries that have recently begun operations. A 4-mile radius map of the Olympic site is provided in Appendix A.

2.3 SITE HISTORY

The site is currently owned by the Clorox Company. The site is operated by Olympic Stain, a division of the Clorox Company. Olympic Stain currently produces 25,000 gallons of water-based paints per day at this site (Reinhardt 1989).

Olympic Stain began operations at this Batavia facility in March 1977. At that time, Olympic Stain was a division of Comerco, Inc. In October 1981, Comerco, Inc., was purchased by the Clorox Company. Consequently, Olympic Stain became a division of Clorox. Prior to 1977, the site was an unused field.



SOURCE: Ecology and Environment, Inc., 1989; BASE MAP: USGS Aurora North, IL Quadrangle, 7.5 Minute Series, 1964; Geneva, IL Quadrangle, 7.5 Minute Series, 1964.

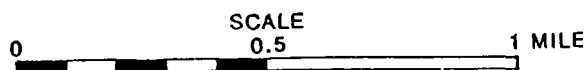


FIGURE 2-1 SITE LOCATION

Between 1977 and 1983, both water-based paints and linseed oil-based stains were produced at the site (Reinhardt 1989). Stain production at the site was discontinued in 1983.

The production of stains led to the generation of the following RCRA-type wastes: K078, K079, and K082 (Olympic Stain 1981). These wastes are described generally as solvent, water, or caustic cleaning wastes from equipment and tank cleaning from paint manufacturing, and air pollution control emission sludge from paint manufacturing operations. These wastes were transported off-site to several recycling facilities, including Lafox/Radco and Sheffield/U.S. Ecology. Wastes classified as K078, K079, and K082 have since been delisted from the RCRA program.

Olympic Stain operated a sand mill at the site to grind large-grained paste into paint. This mill was cooled with water. Olympic Stain held a National Pollution Discharge Elimination System (NPDES) permit for discharge of this once-through, noncontact cooling water into the Fox River from 1977 through October 1982. The receiving surface water body was not the Fox River as was permitted, but a small, unnamed tributary of the Fox River that runs adjacent to the Olympic Stain facility on the west. The sand mill ceased operations in 1983 (Reinhardt 1989). The outfall still exists on the bank of the unnamed stream. This cooling water was classified as nonhazardous.

At present, no hazardous waste from the Olympic Stain facility is transported off-site. All hazardous waste generated, mainly a 10% paint/wastewater mixture, is recycled inside the Olympic Stain facility and is reused.

Olympic Stain currently operates four 25,000-gallon underground storage tanks (USTs). These four USTs hold various glycols (ethylene and propylene). These glycols are used as raw materials in Olympic Stain's paint production. Three 25,000-gallon USTs and three 15,000-gallon USTs were excavated and removed in November 1988. No evidence of leakage from these USTs was discovered (Reinhardt 1989). The tanks were used for storage of linseed oil, resin, and miscellaneous solvents. When Olympic Stain switched from oil-based paint and stain to water-based paint production in 1983, these six USTs were no longer needed.

During the 12 years that Olympic Stain has operated its Batavia facility, no on-site disposal of hazardous waste has occurred. Hazardous raw materials used in the production of paint and stain have been stored at the site (Reinhardt 1989).

The Illinois Environmental Protection Agency (IEPA) conducted a RCRA inspection of the Olympic Stain facility on December 4, 1981 (IEPA 1981). The Olympic Stain facility was subject to RCRA provisions due to a July 16, 1980, amendment which added K078, K079, and K082 wastes from paint manufacturing to RCRA. Because these wastes have since been delisted, the Olympic Stain facility is currently not included in the RCRA program. The IEPA inspection report stated that the Olympic Stain facility was very clean and well organized (IEPA 1981). IEPA periodically monitors the four USTs currently used at the Olympic Stain facility.

3. SCREENING SITE INSPECTION PROCEDURES AND FIELD OBSERVATIONS

3.1 INTRODUCTION

This section outlines procedures and observations of the SSI of the Olympic site. Individual subsections address the site representative interview, reconnaissance inspection, and sampling procedures. Rationales for specific FIT activities are also provided. The SSI was conducted in accordance with the U.S. EPA-approved work plan with the following changes: seven soil/sediment samples and no residential well samples were collected.

The work plan called for 11 soil/sediment samples and 3 residential well samples to be collected. The reasons for the changes are as follows. Fewer soil samples were collected because FIT believed the site could be adequately characterized with the collection of 7 soil samples. No residential well samples were collected because the areas in which FIT believed private wells were still in use are actually serviced by Batavia's or Geneva's municipal water system. Approximately 675 persons within 3 miles of the Olympic Stain facility continue to use private wells. However, the majority of these wells are more than 1 mile from the Olympic site. Because many industries and several landfills (Midway, Settler's Hill) are located in the area of the site, attribution to the Olympic site of any contaminants potentially detected in residential wells would be difficult. The decision to alter the work plan was made once FIT was on-site.

A 4-mile radius map showing approximate water distribution boundaries is included in Appendix A. The U.S. EPA Potential Hazardous Waste

Site Inspection Report (Form 2070-13) for the Olympic site is provided in Appendix B.

3.2 SITE REPRESENTATIVE INTERVIEW

Bill Schaefer, FIT team leader, conducted an interview with Jim Reinhardt, Plant Manager for Olympic Stain's Batavia facility, and Daniel D. Musgrove, P.E., Senior Environmental Engineer with the Clorox Company, at 9:40 a.m., on February 7, 1989. The interview took place at Olympic Stain's Batavia facility. Andrea Davis, FIT team member, was also present. The interview was conducted to gather information that would aid FIT in conducting SSI activities.

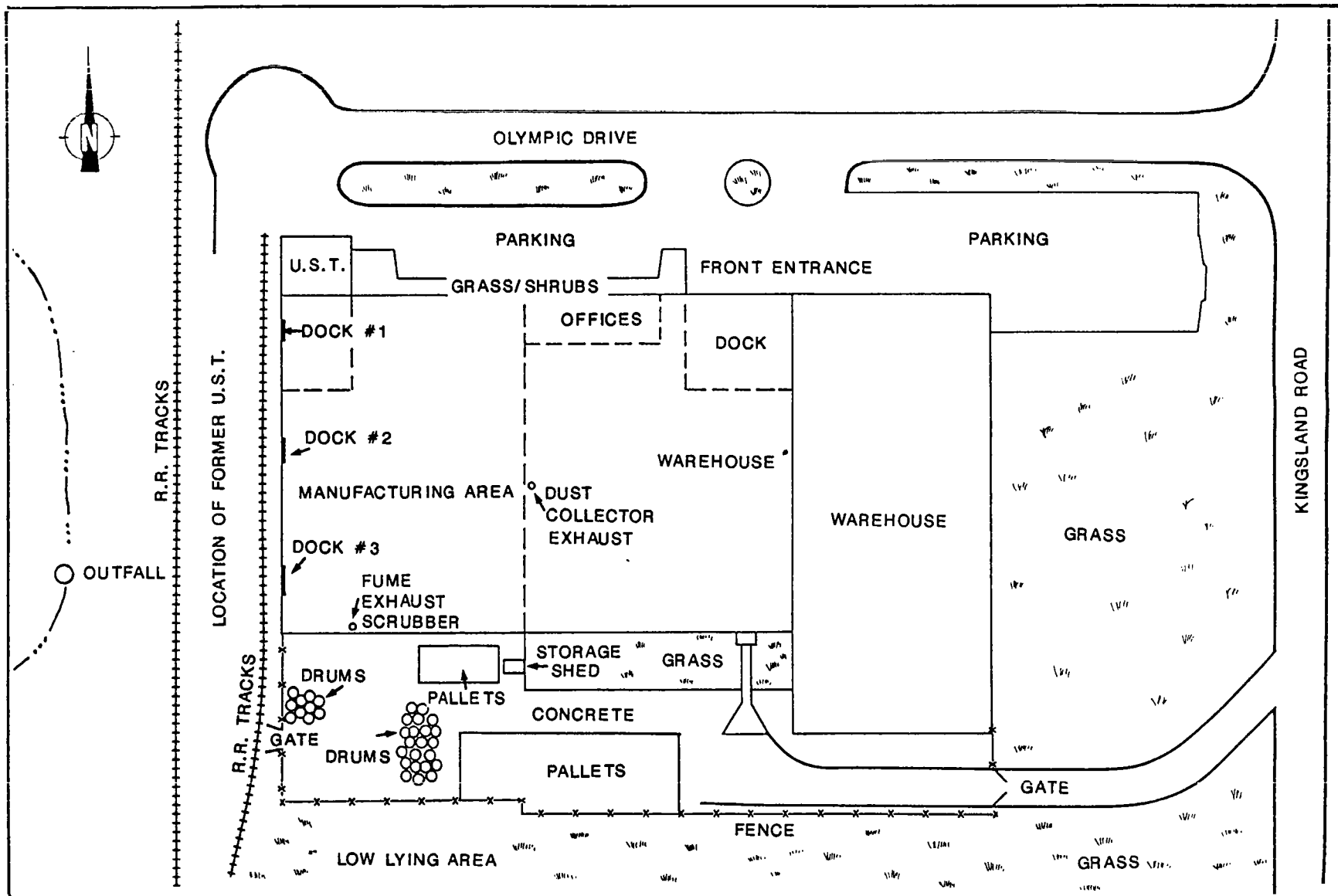
3.3 RECONNAISSANCE INSPECTION

Following the site representative interview, FIT conducted a reconnaissance inspection of the Olympic site and surrounding area in accordance with Ecology and Environment, Inc. (E & E), health and safety guidelines. The reconnaissance inspection included a walk-through of the site to determine appropriate health and safety requirements for conducting on-site activities and to make observations to aid in characterizing the site. FIT also determined exact sampling locations during the reconnaissance inspection.

The reconnaissance inspection was begun on February 7, 1989, at 10:30 a.m. Reinhardt and Musgrove accompanied FIT during the reconnaissance inspection.

Reconnaissance Inspection Observations. The Olympic site is located in an industrialized area in eastern Batavia, Illinois. The site property consists of 5 1/4 acres. There are no residences within the immediate vicinity of the site (see Figure 3-1 for locations of site features).

The area of Batavia surrounding the site is being developed rapidly for industrial purposes. To the north, south, and east of the Olympic site are other industrial/manufacturing facilities. To the west of the Olympic site is an unused field. An agricultural field exists to the southwest of the site.



SOURCE: Ecology and Environment, Inc. 1989.



FIGURE 3-1 SITE FEATURES

The Olympic site contains one large, aluminum-sided building (the plant) which faces north. The plant is divided into three sections, a manufacturing area, a warehouse area, and an office area.

A railroad spur runs adjacent to the west side of the building. Three loading docks are located on the west side of the plant. The docks allow materials (mainly titanium dioxide) to be unloaded from railroad cars through these docks and directly into the manufacturing area of the Olympic Stain plant. Five of the six USTs that were removed were buried just to the west of this spur.

The Olympic Stain facility has a concrete storage area along the south edge of the plant. Olympic Stain stores the following items on this concrete pad: empty 55-gallon drums (approximately 40 drums total), wooden pallets, unused equipment, and propane bottles. A shed in which Olympic Stain stores lawnmowers, gasoline, and oil is also located on the concrete pad. This concrete-surfaced storage area is completely fenced. There are two locked gates in the fence. The 40, 55-gallon drums in storage on the concrete pad were empty on the date of the SSI. These empty drums at one time contained solvents used as coalescing agents in latex paints and as cleaning compounds for paint manufacturing equipment (Reinhardt 1989).

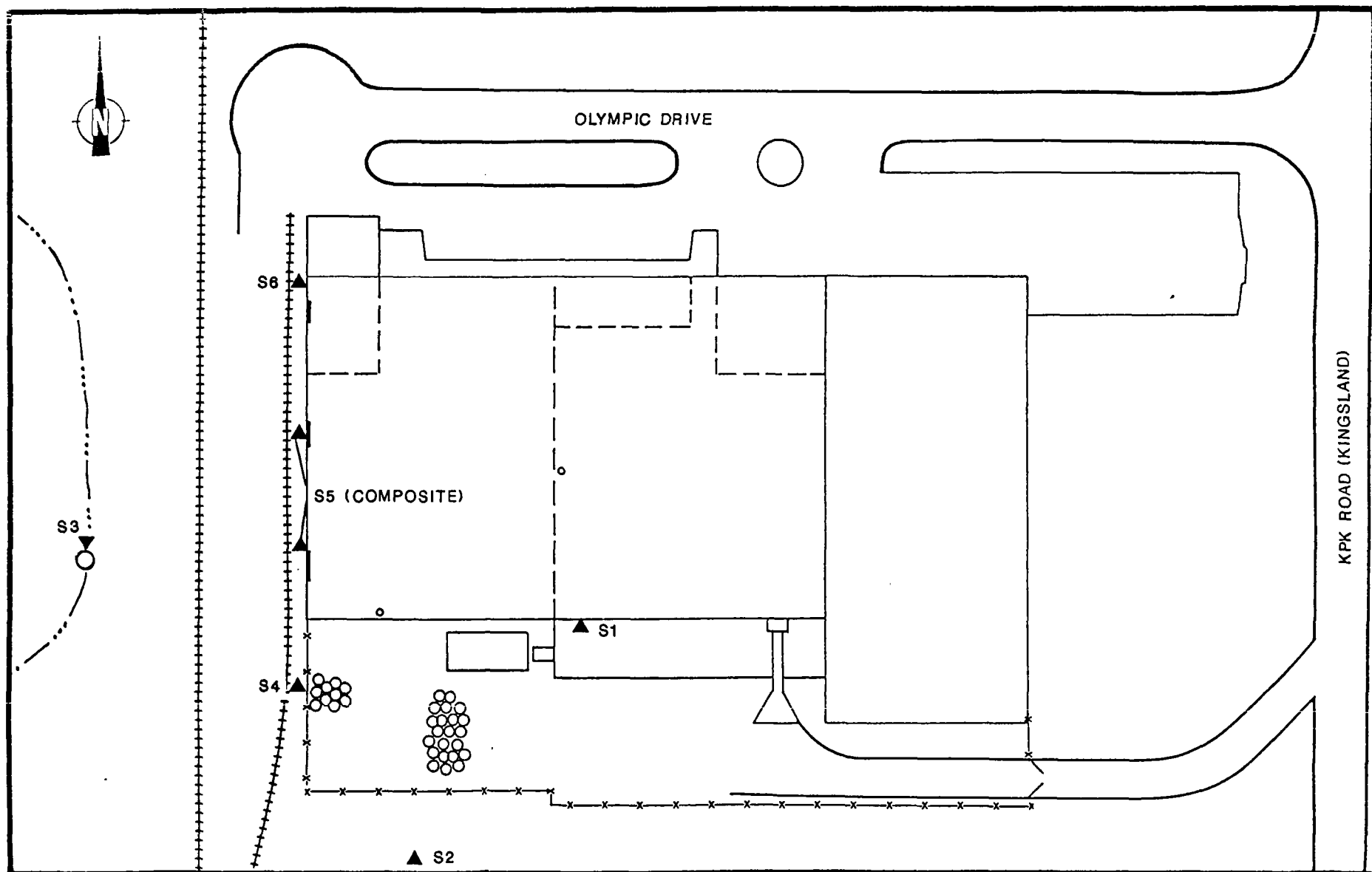
To the north of the Olympic Stain plant is a parking lot. The area immediately to the east of the plant is currently a manicured lawn. Site photographs are provided in Appendix C.

3.4 SAMPLING PROCEDURES

Samples were collected by FIT at locations selected during the reconnaissance inspection to determine levels of U.S. EPA Target Compound List (TCL) compounds and U.S. EPA Target Analyte List (TAL) analytes present at the site. The TCL and TAL, with corresponding quantitation/detection limits, are provided in Appendix D.

On February 7, 1989, FIT collected three surface soil samples, two sediment samples, one waste sample, and one potential background sample. A portion of each sample was offered to, but not accepted by, site representatives.

Soil Sampling Procedures. Surface soil sample S1 was collected adjacent to the Olympic Stain plant's south wall (see Figure 3-2 for



SOURCE: Ecology and Environment, Inc. 1989.

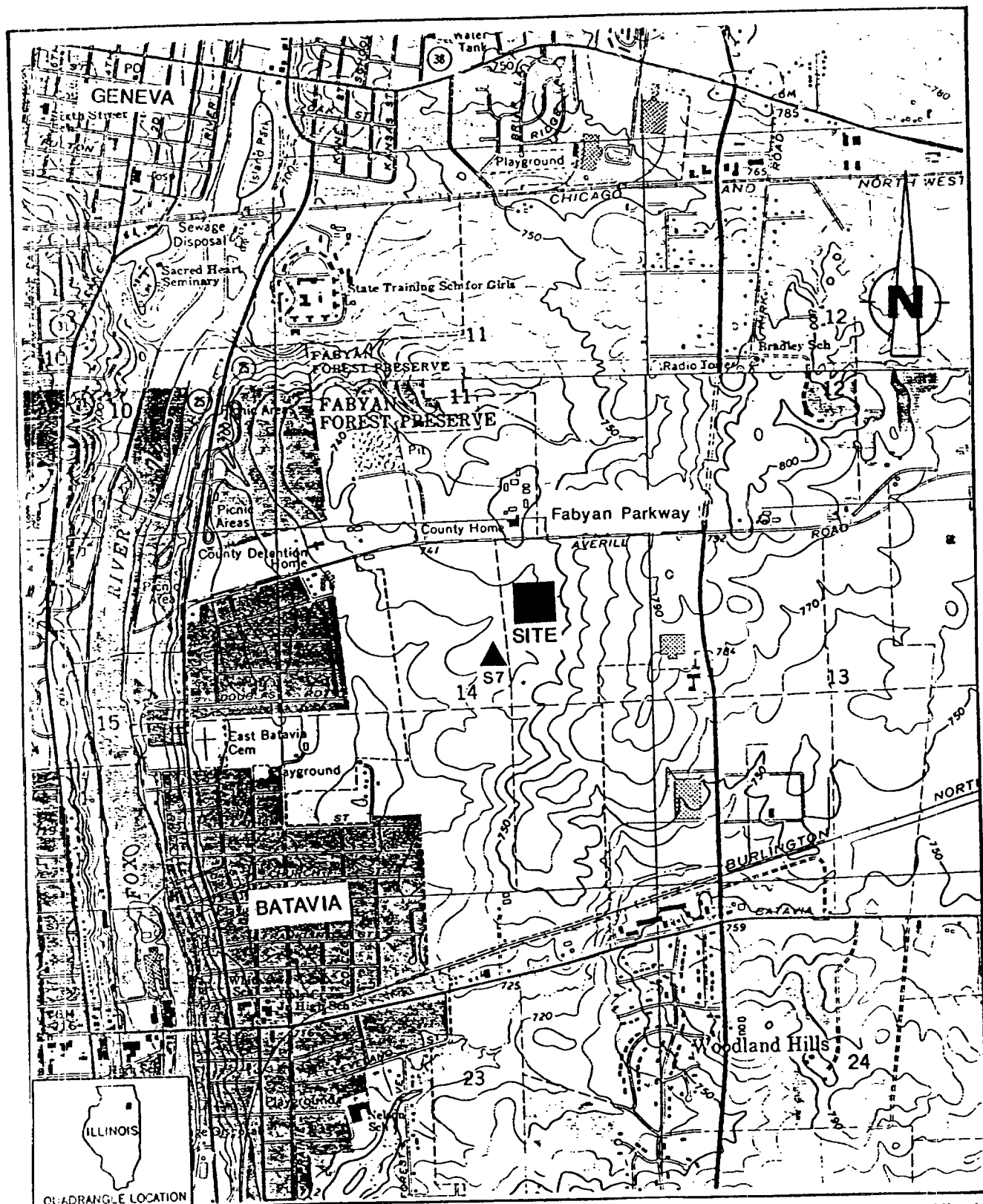


FIGURE 3-2 ON-SITE SOIL/SEDIMENT SAMPLING LOCATIONS

on-site soil/sediment sampling locations). This sample location was chosen because FIT observed a stain on the building's wall from ground level up to 3 feet. Sediment sample S2 was collected from a wet low-lying area to the south of the drum storage area. There was approximately 1 inch of water above this sediment sample location. FIT observed that any leakage from the drums would migrate into this low-lying area. Sediment sample S3 was collected from a small unnamed creek that runs to the west of the Olympic site. Olympic Stain at one time held an NPDES permit to discharge noncontact cooling water into the Fox River. The actual discharge point was the small creek, which is a tributary of the Fox River. Sediment sample S3 was collected below the discharge outfall. Further sampling of the creek's sediment was not conducted because, with the many industries in the area, attribution of any contamination in the sediment to the Olympic site would be difficult.

Surface soil sample S4 was collected adjacent to the concrete storage area on its west side. This sample location was chosen to determine whether TCL compounds or TAL analytes had migrated from the concrete-paved drum storage area. Surface soil sample S5 was a composite sample consisting of soil collected from underneath loading docks 2 and 3 on the plant's west side. This sample was collected to determine whether any spills or leaks have occurred during loading or unloading operations at these docks. Sample S6 was collected from a pile of whitish powder present underneath one of two railroad cars on the spur that runs adjacent to the west side of the Olympic Stain plant. The train car was labeled as containing titanium dioxide, a substance used by Olympic Stain as a pigment in paints. It is assumed that the pile of whitish powder came from this train car. The pile was not contained in any way and was free to be dispersed by the wind. For this reason, the pile was sampled to determine its composition.

A potential background surface soil sample (indicated as S7) was collected from a wooded area southwest of the site (see Figure 3-3 for off-site soil sampling location). The background soil sample was collected to determine the representative chemical content of the soil of



SOURCE: Ecology and Environment, Inc., 1989; BASE MAP: USGS Aurora North, IL Quadrangle, 7.5 Minute Series, 1964; Geneva, IL Quadrangle, 7.5 Minute Series, 1964.

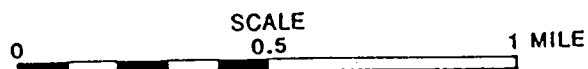


FIGURE 3-3 OFF-SITE SOIL SAMPLING LOCATION

the area surrounding the site. The location was chosen because the ground surface appeared to be in an undisturbed state.

Surface soil samples S1 and S4 were collected with a stainless steel garden trowel at depths of 3 inches and 6 inches, respectively. Soil was transferred from the above-mentioned depths to a stainless steel bowl using a garden trowel until an adequate sample volume was collected. Twigs, rocks, and foreign matter were then removed. The soil was then transferred from the bowl to sample bottles using the garden trowel (E & E 1987).

Sediment sample S2 was collected in a wet, low-lying area with a garden trowel at a depth of 2 inches. The sediment was transferred to a stainless steel bowl with the trowel. When an adequate amount of sample material had been collected, the sediment was transferred to sample bottles using the garden trowel (E & E 1987).

Sediment sample S3 was collected in the following manner. A post-hole digger was used to break apart approximately 6 inches of ice that covered the small creek into which Olympic Stain had discharged non-contact cooling water. Once the ice had been broken, the posthole digger was used to collect sediment from the creek bottom. This sediment was transferred with the posthole digger into a stainless steel bowl. The depth of water in the creek was approximately 2 feet. When an adequate volume of the sediment was collected in the bowl, the sample material was transferred to sample bottles using a stainless steel spoon (E & E 1987).

Surface soil sample S5 was a composite sample. Sample material was collected first from underneath dock number 3 at a depth of 1 inch with a garden trowel and transferred to a stainless steel bowl. Next, sample material was collected from underneath dock number 2, also at a depth of 1 inch, and transferred to the same stainless steel bowl. To obtain a homogeneous sample, the composite sample was mixed in the bowl using a stainless steel spoon. The resulting sample material was then transferred to sample bottles using the stainless steel spoon (E & E 1987).

Waste sample S6 was collected from the pile of presumed titanium dioxide underneath the train car using a garden trowel. Sample material was collected from various portions of the pile and transferred directly to sample bottles with the trowel.

The potential background sample S7 was obtained using a garden trowel to dig to a depth of 3 inches. Soil was then transferred to a stainless steel bowl using the garden trowel. Sample material was then transferred from the bowl to sample bottles using a stainless steel spoon (E & E 1987).

Standard E & E decontamination procedures were adhered to during the collection of all soil samples. The procedures included the scrubbing of all equipment (trowels, bowls, spoons, and posthole digger) with a solution of detergent (Alconox) and distilled water, and triple-rinsing the equipment with distilled water before the collection of each sample (E & E 1987). All soil samples were packaged and shipped in accordance with U.S. EPA-required procedures.

As directed by U.S. EPA, all soil samples were analyzed under the Contract Laboratory Program (CLP) for TCL compounds by EMS Laboratories of Indianapolis, Indiana, and for TAL analytes by Vegas Analytical Laboratories, Inc., of Las Vegas, Nevada.

4. ANALYTICAL RESULTS

4.1 INTRODUCTION

This section includes results of chemical analysis of FIT-collected soil samples for TCL compounds and TAL analytes.

4.2 RESULTS OF CHEMICAL ANALYSIS OF FIT-COLLECTED SAMPLES

Soil/Sediment Samples. Chemical analysis of FIT-collected soil samples revealed substances from the following groups of TCL compounds and TAL analytes: halogenated hydrocarbons, polycyclic aromatic hydrocarbons (PAHs), pesticides, and metals, including heavy metals (see Table 4-1 for complete chemical analysis results of FIT-collected soil samples).

U.S. EPA CLP quantitation/detection limits used in the analysis of soil samples are provided in Appendix D.

Table 4-1
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED SOIL/SEDIMENT SAMPLES

Sample Collection Information and Parameters	<u>Sample Number</u>						
	S1	S2	S3	S4	S5	S6	S7
Date	2/7/89	2/7/89	2/7/89	2/7/89	2/7/89	2/7/89	2/7/89
Time	1130	1145	1220	1255	1320	1345	1405
CLP Organic Traffic Report Number	EZ786	EZ787	EZ788	EZ789	EZ790	EZ791	EZ792
CLP Inorganic Traffic Report Number	MEZ146	MEZ147	MEZ148	MEZ149	MEZ150	MEZ151	MEZ152
<u>Compound Detected</u> (values in $\mu\text{g/kg}$)							
<u>Volatile Organics</u>							
tetrachloroethene	12	6	—	—	—	—	—
<u>Semivolatile Organics</u>							
phenanthrene	1,500J	12,000	1,500J	—	—	—	—
anthracene	—	3,100J	—	—	—	—	—
fluoranthene	3,600	19,000	1,400J	—	—	—	—
pyrene	1,900	16,000	1,100J	—	—	—	—
benzo[a]anthracene	1,300J	8,000J	—	—	—	—	—
chrysene	1,500J	11,000J	720J	—	—	—	—
benzo[b]fluoranthene	1,100J	7,100J	—	—	—	—	—
benzo[k]fluoranthene	1,200J	7,700J	—	—	—	—	—
benzo[a]pyrene	1,400J	7,600J	—	—	—	—	—
indeno[1,2,3-cd]pyrene	920J	6,200J	—	—	—	—	—
benzo[g,h,i]perylene	720J	6,500J	—	—	—	—	—
<u>Pesticides/PCBs</u>							
gamma BHC (Lindane)	10J	76	—	—	12	3.4J	—
Heptachlor epoxide	2.9J	—	—	—	—	—	—
Dieldrin	59	40J	—	—	14J	2.6J	2.9J
Endrin	12J	—	—	—	—	—	—
4,4'-DDT	17J	—	—	—	—	—	5.4J
Methoxychlor (Mariate)	31J	—	—	—	21J	—	—
gamma Chlordane	—	—	—	—	7.2J	—	—

Table 4-1 (Cont.)

Sample Collection Information and Parameters	Sample Number						
	S1	S2	S3	S4	S5	S6	S7
<u>Analyte Detected</u>							
(values in mg/kg)							
aluminum	16,500	18,300	9,440	4,370	12,200	26,300	16,500
antimony	—	11.4JBN	5.4JBN	3JBN	5.5JBN	—	—
arsenic	9.8	15.3	9.5	6.3	10.1	—	9.2
barium	198	130B	61.2B	25B	108	6.2B	150
beryllium	1.3B	3B	1.4B	0.71	1.4	0.40B	0.75B
cadmium	0.69B	1.7B	—	—	—	0.44B	0.47B
calcium	7,340	66,300	51,800	73,600	57,300	2,730	4,930
chromium	24.9	144	14.1	3.7	19.4	1.4B	19.4
cobalt	18.4	16.9B	8.8B	4.9B	6.8B	3.5B	14.7
copper	25.3	54.7	23.4	13.8J	20.5	4.7J	23.4
iron	21,900	33,800	15,900	8,950	16,900	476	21,800
lead	29.9	440	22.2	7.9	18.3	3.6	23.9
magnesium	4,680	38,800	26,400	40,500	33,800	1,220	4,400
manganese	1,470	843	433	297	336	9.3	974
mercury	—	—	—	—	—	0.21	—
nickel	22	36.4	19.6	12.5	18.5	4.6B	21.3
potassium	2,170	3,270B	1,600B	1,040	1,710	145B	2,160
sodium	135B	335B	248B	147B	201B	3,530	107B
vanadium	37.1	44.9	24.1	13.4	29.4	2.5B	40.2
zinc	110	512	87	199	117	15.7	71.7

— Not detected.

Table 4-1 (Cont.)

COMPOUND QUALIFIER	DEFINITION	INTERPRETATION
J	Indicates an estimated value.	Compound value may be semiquantitative.
ANALYTE QUALIFIERS	DEFINITION	INTERPRETATION
N	Spike recoveries outside QC protocols, which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
J	Value is above CRDL and is an estimated value because of a QC protocol.	Value may be semiquantitative.

Source: Ecology and Environment, Inc. 1989.

5. DISCUSSION OF MIGRATION PATHWAYS

5.1 INTRODUCTION

This section discusses data and information that apply to potential migration pathways and targets of TCL compounds and TAL analytes that may be attributable to the Olympic site.

The five migration pathways of concern discussed are: groundwater, surface water, air, fire and explosion, and direct contact.

5.2 GROUNDWATER

Because groundwater sampling was not conducted during the SSI of the Olympic site, it was not determined whether TCL compounds or TAL analytes are present in groundwater in the vicinity of the site.

A potential exists for TCL compounds and TAL analytes to migrate from the site to groundwater in the vicinity of the site. This potential is based on the following information.

- TCL compounds and TAL analytes have been detected in on-site soil samples.
- Olympic Stain stores various glycols in four underground tanks at the site. The integrity of these USTs is monitored by Olympic Stain and IEPA. According to Olympic Stain's Plant Manager, neither the four USTs currently in use nor the six USTs which were removed have ever leaked their contents (Reinahrtdt 1989). However, given the inherent characteristics of USTs, a potential exists for future problems from leakage.

According to Illinois Department of Public Health well logs, private wells in the area of the site draw groundwater from the Silurian dolomite aquifer. The depth to this bedrock layer is approximately 50 to 60 feet. The depth to the water table within 3 miles of the site is also between 50 and 60 feet. The nearest municipal well is approximately 1 1/8 miles to the southwest.

The surficial geology in the site area consists of glacially derived deposits of unsorted sand, silt, boulders, and clay. Sand and gravel lenses are thin and discontinuous or absent. The unsorted glacial till deposits have their surface expression in the ground and end moraines which define the morphology of the unconsolidated deposits. Recharge to the bedrock aquifer below the drift is probably from local precipitation which infiltrates through the permeable unconsolidated glacial deposits (Schicht et al. 1976).

The Silurian system is the aquifer of concern in the vicinity of the Olympic site. The Silurian system consists of two dolomite series, the Niagaran and the Alexandrian. The Niagaran series overlies the Alexandrian and is between 75 and 125 feet thick. The deeper Alexandrian series is between 100 and 150 feet thick. The Silurian dolomite is separated from the deeper limestone and dolomite aquifers of the Galena and Platteville groups by approximately 80 feet of Maquoketa shale (Woller et al. 1986). Shallow groundwater flow, if sand lenses exist in the unconsolidated drift, is probably to the west-southwest toward the Fox River. Groundwater flow in the shallow Silurian dolomites is highly influenced by regional pumping centers and cannot be determined without more current information than has been located. Groundwater flow in the deep Cambrian-Ordovician aquifer system is probably tending west to east in the site area.

According to the 1980 census determination of an average of 2.92 persons per household in Kane and DuPage Counties (U.S. Bureau of the Census 1982), and a house count using a United States Geological Survey (USGS) topographic map of the area of the site (USGS 1964), the potential targets of groundwater contamination include approximately 675 persons who obtain water from private wells within a 3-mile radius of the site. There are three municipal water systems (Batavia, Geneva, West Chicago) which distribute potable water within 3 miles of the

Olympic site. Due to the growth these three cities are currently experiencing, the water distribution boundaries are often expanding. It is possible that some of the 675 persons included in the population of private well users are actually connected with one of the three municipal water systems. The Olympic Stain facility is supplied with Batavia municipal water.

There are four Batavia municipal wells and four Geneva municipal wells within 3 miles of the Olympic site (see Appendix A for municipal well locations). All West Chicago municipal wells are beyond the 3-mile radius of the Olympic site. The seven municipal wells within three miles of the Olympic site are all open to the Cambrian-Ordovician aquifer at a depth of close to 2,200 feet (Woller et al. 1986). Well logs for these municipal wells are provided in Appendix E.

Over 22,000 persons are served by the Batavia and Geneva municipal systems. The populations served by these two systems have not been included as potential groundwater targets because of the extreme depths of the municipal wells and the presence of confining layers, including approximately 80 feet of Maquoketa shale.

5.3 SURFACE WATER

TCL compounds and TAL analytes were detected in the creek sediment sample (S3). At this time, it cannot be determined whether these TCL compounds and TAL analytes are attributable to the Olympic site. More extensive samples would need to be completed to make an attribution.

No potential exists for TCL compounds and TAL analytes to migrate from the site to surface water bodies in the vicinity of the Olympic Stain facility through overland migration. The lack of potential is based on the following information.

- Two sets of railroad tracks exist between the site and the unnamed creek which flows to the west of the Olympic Stain plant. These railroad tracks are slightly elevated on a gravel bed.

- A section of the Fox River is located within 1 mile of the site, but is not threatened because of intervening terrain and infrastructure.

Olympic Stain stopped discharging noncontact cooling water into the unnamed creek in 1982. However, the outfall and connecting discharge pipes have never been removed. Therefore, a low potential exists for TCL compounds and TAL analytes to reach the creek through the outfall.

5.4 AIR

A release of potential contaminants to the air was not documented during the SSI of the Olympic site. During the reconnaissance inspection, FIT site-entry instruments (OVA 128, explosimeter, oxygen meter, and hydrogen cyanide monitor) did not detect levels above background concentrations at the site. In accordance with the U.S. EPA-approved work plan, further air monitoring was not conducted by FIT.

A potential does exist for materials, some of which may be hazardous, to leave the site through the air after being spilled in the loading dock area on the west side of the Olympic Stain facility. FIT observed an uncontained pile of a whitish powder, assumed to be titanium dioxide, on the railroad spur which runs adjacent to the loading docks. The powder apparently had been spilled onto the tracks from railroad tank cars unloading the substance into the Olympic Stain manufacturing area. Titanium dioxide is a human skin irritant and nuisance dust (Sax 1984).

Olympic Stain's manufacturing operations require the use of two exhaust vents, one to emit exhaust from a fume scrubber, the other to emit air which has passed through a dust collection device. These exhaust vents are monitored and permitted by IEPA (Reinhardt 1989).

The target population potentially affected via airborne particulate contamination is approximately 33,431. This figure was calculated by multiplying the average population density of 2.92 persons per household in both Kane and DuPage Counties (U.S. Bureau of the Census 1982) by the number of homes within a 4-miles radius of the site. The number of

homes within a 4-mile radius of the site was obtained using USGS topographic maps of the area of the site (USGS 1964), and using a planimeter to calculate population in densely urbanized areas. The target population may be biased low due to the dated (1964) topographic maps used.

5.5 FIRE AND EXPLOSION

According to file information from federal, state, and local agencies reviewed by FIT, no apparent unusual potential for fire or explosion exists at the Olympic site. Deputy Chief Strand of the City of Batavia Fire Department has stated that flammable materials are present on-site due to the manufacture of paint, but that no fire or explosion hazard is present due to precautions taken by Olympic Stain. These precautions include a fire-proof storage room, a new sprinkler system, and class I, division II, electrical wiring (Strand 1988). FIT observations and explosimeter readings support Strand's statement.

5.6 DIRECT CONTACT

According to file information from federal, state, and local sources reviewed by FIT, there have been no past incidents of direct contact with TCL compounds or TAL analytes at the Olympic site. However, a potential exists that the public may come into direct contact with the spilled titanium dioxide. Access to the railroad track upon which the titanium dioxide is spilled is not restricted in any way.

The target population residing within a 1-mile radius of the site is approximately 3,447 persons. This population was calculated using both house count and planimeter methods.

6. BIBLIOGRAPHY

E & E, 1987, Quality Assurance Project Plan Region V FIT Conducted Site Inspections, Chicago, Illinois.

IEPA, December 4, 1981, RCRA Inspection Report - Interim Status Standards, for Olympic Stain-Clorox Division, prepared by Brad Benning of IEPA.

Olympic Stain, May 11, 1981, Notification of Hazardous Waste Site form, filed by James Todd, Plant Manager, with U.S. EPA.

Reinhardt, Jim, February 9, 1989, Plant Manager, Olympic Stain, Batavia, Illinois, interview, conducted by Bill Schaefer of E & E.

Sax, I. N., 1984, Dangerous Properties of Industrial Materials, 6th edition, Van Nostrand Reinhold Company, Inc., New York.

Schicht, Richard J., J. Rodger Adams, and John B. Stall, 1976, Water Resources Availability, Quality, and Cost in Northeastern Illinois, Illinois State Water Survey, Urbana, Illinois.

Strand, July 20, 1988, Deputy Chief of the Batavia Fire Department, Batavia, Illinois, telephone conversation, contacted by Bill Schaefer of E & E.

U.S. Bureau of the Census, 1982, 1980 Census, General Population Characteristics--Illinois.

U.S. EPA, February 12, 1988, Office of Solid Waste and Emergency Response, Pre-Remedial Strategy for Implementing SARA, Directive number 9345.2-01, Washington, D.C.

USGS, 1964, Geneva, Illinois; 1964, West Chicago, Illinois; 1972, Aurora North, Illinois; and 1962, Naperville, Illinois, quadrangles, 7.5 Minute Series: 1:24,000.

Woller, Dorothy, Ellis Sanderson, and Michael Sargent, 1986, Public Groundwater Supplies in Kane and DuPage Counties, Illinois State Water Survey, Champaign, Illinois.

3533:2

APPENDIX A

SITE 4-MILE RADIUS MAP

SDMS US EPA Region V

Imagery Insert Form

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APPENDIX B

U.S. EPA FORM 2070-13



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION
01 STATE IL 02 SITE NUMBER D085224186

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) COMERCO, INC. OLYMPIC STAIN DIV. 02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER 1020 Olympic Drive
03 CITY Batavia 04 STATE IL 05 ZIP CODE 60510 06 COUNTY Kane 07 SPECIALTY CODE 089 09 CONC DIST 15
04 COORDINATES
LATITUDE 41° 52' 02.0" LONGITUDE 088° 18' 02.5"
10 TYPE OF OWNERSHIP (Check one)
☒ A. PRIVATE ☐ B. FEDERAL ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION 02.07.89 02 SITE STATUS ☒ ACTIVE ☐ INACTIVE 03 YEARS OF OPERATION 1977, 1989 (PRESENT) UNKNOWN
04 AGENCY PERFORMING INSPECTION (Check all that apply)
☒ A. EPA ☒ B. EPA CONTRACTOR Ecology & Environment Inc. ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR
☐ E. STATE ☐ F. STATE CONTRACTOR ☐ G. OTHER

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Bill Schaefer	Environmental Engineer	E & E	(312) 663-9415
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Andrea Davis	Geographer	E & E	(312) 663-9415
Laura Evans	Industrial Hygienist	E & E	(312) 663-9415
Mike McAteer	Geographer	E & E	(312) 663-9415
			()
			()

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO.
Jim Reinhardt	Olympic Plant Manager	1020 Olympic Dr. Batavia	(312) 879-5100
Daniel D. Musgrove, P.E.	Clorox - Senior Environmental Engineer	7200 Johnson Drive Pleasanton, CA 94566	(415) 847-6106
			()
			()
			()
			()

17 ACCESS GAINED BY (Check one)
☒ PERMISSION ☐ WARRANT 18 TIME OF INSPECTION 0940 - 1510 19 WEATHER CONDITIONS Sunny, 80°F, 10mph W-SW winds ~6" snow cover

IV. INFORMATION AVAILABLE FROM

01 CONTACT Tom Crause	02 OF (Agency/Department) Illinois EPA	03 TELEPHONE NO. (217) 782-9848
04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM Bill Schaefer	05 AGENCY U.S. EPA	06 ORGANIZATION E & E
	07 TELEPHONE NO. (312) 663-9415	08 DATE 5.12.89 MONTH DAY YEAR



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

IDENTIFICATION
01 STATE 02 SITE NUMBER
IL D085224 186

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply) <input type="checkbox"/> A. SOLID <input type="checkbox"/> B. POWDER, FINES <input type="checkbox"/> C. SLUDGE <input type="checkbox"/> D. OTHER _____ <input type="checkbox"/> E. SLURRY <input type="checkbox"/> F. LIQUID <input type="checkbox"/> G. GAS	02 WASTE QUANTITY AT SITE (Measurements of waste quantities must be independent) TONS <u>unknown</u> CUBIC YARDS <u>unknown</u> NO. OF DRUMS <u>unknown</u>	03 WASTE CHARACTERISTICS (Check all that apply) <input type="checkbox"/> A. TOXIC <input type="checkbox"/> B. CORROSIVE <input type="checkbox"/> C. RADIOACTIVE <input type="checkbox"/> D. PERSISTENT <input type="checkbox"/> E. SOLUBLE <input type="checkbox"/> F. INFECTIOUS <input type="checkbox"/> G. FLAMMABLE <input type="checkbox"/> H. IRRITABLE <input type="checkbox"/> I. HIGHLY VOLATILE <input type="checkbox"/> J. EXPLOSIVE <input type="checkbox"/> K. REACTIVE <input type="checkbox"/> L. INCOMPATIBLE <input type="checkbox"/> M. NOT APPLICABLE materials present on-site are raw materials, not waste.
---	---	--

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS	unknown		detected in FIT soil samples
PSO	PESTICIDES	unknown		detected in FIT soil samples
OOC	OTHER ORGANIC CHEMICALS	unknown		detected in FIT soil samples
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	unknown		detected in FIT soil samples.

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/ DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
OCC	phenanthrene	85-01-8	Soil sample S2	12000	ug/kg
OCC	anthracene	120-12-7	Soil sample S2	3,100 J	ug/kg
OCC	fluoranthene	206-44-0	Soil sample S2	19,000	ug/kg
OCC	pyrene	129-00-0	Soil sample S2	16000	ug/kg
OCC	benzo[a]anthracene	56-55-3	Soil sample S2	8,000 J	ug/kg
OCC	chrysene	218-01-9	Soil sample S2	11000 J	ug/kg
OCC	benzo[b]fluoranthene	205-99-2	Soil sample S2	7100 J	ug/kg
OCC	benzo[k]fluoranthene	207-08-9	Soil sample S2	7700 J	ug/kg
OCC	benzo[a]pyrene	50-32-8	Soil sample S2	7600 J	ug/kg
OCC	indeno[1,2,3-cd]pyrene	193-39-5	Soil sample S2	6200 J	ug/kg
OCC	benzo[ghi]perylene	191-24-2	Soil sample S2	6500 J	ug/kg
SOL	tetrachloroethene	127-18-4	Soil sample S1	12	ug/kg
PSD	gamma BHC (Lindane)	58-89-9	Soil sample S2	76	ug/kg
PSD	Heptachlor epoxide	1024-57-3	Soil sample S1	2.9 J	ug/kg

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	Texanol	unk	FDS		
FDS	Rhoplex	unk	FDS		
FDS	Acrysol	unk	FDS		
FDS	Proxel CRL	unk	FDS		

VI. SOURCES OF INFORMATION (See Appendix for sources, e.g., state files, sample analysis, records)

- Laboratory data from FIT 2/7/89 sampling.
- File information Region V

ILD085224186

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
PSD	Dieldrin	60-57-1	Soil Sample S1	59	ug/kg
PSD	Endrin	72-20-8	" " S1	12	ug/kg
PSD	4,4'-DDT	50-29-3	" " S1	17J	ug/kg
PSD	Methoxychlor	72-43-5	" " S1	31J	ug/kg
PSD	gamma Chlordane	5103-74-2	" " S5	7.2 J	ug/kg
MES	aluminum	7429-90-5	Soil Sample S6	26300	mg/Kg
MES	antimony	7440-36-0	" " S2	11.4 JBN	mg/Kg
MES	arsenic	7440-38-2	" " S2	15.3	mg/Kg
MES	barium	7440-39-3	" " S1	198	mg/Kg
MES	beryllium		" " S5	1.4	mg/Kg
MES	cadmium	7440-43-7	" " S2	1.7 B	mg/Kg
MES	calcium	7440-70-2	" " S4	73600	mg/Kg
MES	chromium	7440-47-3	" " S2	144	mg/Kg
MES	cobalt		" " S1	18.4	mg/Kg
MES	Copper	7440-50-8	" " S2	54.7	mg/Kg
MES	iron	7439-89-6	" " S2	33,800	mg/Kg
MES	lead	7439-92-1	" " S2	440	mg/Kg
MES	magnesium	7439-95-4	" " S2	38,800	mg/Kg
MES	manganese	7439-96-5	" " S1	1,470	mg/Kg
MES	mercury		" " S6	.21	mg/Kg
MES	nickel	7440-02-0	" " S2	36.4	mg/Kg
MES	potassium -	7440-09-7	" " S2	3270	mg/Kg
MES	Sodium	7440-23-5	" " S6	3530	mg/Kg
MES	Vanadium	7440-62-2	" " S2	44.9	mg/Kg
MES	Zinc	7440-66-6	" " S2	512	mg/Kg



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

1 IDENTIFICATION

01 STATE 02 SITE NUMBER
IL D085224186

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 675 04 NARRATIVE DESCRIPTION

See Narrative 5.2

01 ☐ B. SURFACE WATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

See Narrative 5.3

01 ☒ C. CONTAMINATION OF AIR 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 33,431 04 NARRATIVE DESCRIPTION

See Narrative 5.4

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

See Narrative 5.5

01 ☒ E. DIRECT CONTACT 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 3,447 04 NARRATIVE DESCRIPTION

See Narrative 5.6

01 ☒ F. CONTAMINATION OF SOIL 02 ☐ OBSERVED (DATE: 2/7/89) ☐ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: ~1 04 NARRATIVE DESCRIPTION

FIT soil sampling confirmed the presence of TCL compounds and TAL analytes on-site.

01 ☒ G. DRINKING WATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: ~675 04 NARRATIVE DESCRIPTION

See Narrative 5.2

01 ☒ H. WORKER EXPOSURE/INJURY 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 33 04 NARRATIVE DESCRIPTION

The potential exists for worker exposure to spilled titanium dioxide

01 ☒ I. POPULATION EXPOSURE/INJURY 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 33,431 04 NARRATIVE DESCRIPTION

See Narrative 5.6



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

L IDENTIFICATION
IN STATE OR SITE NUMBER
IL D085224 186

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☒ J. DAMAGE TO FLORA
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED

Damage to Flora was not observed by FIT during the SSI. However, because TCL compounds and TAL analytes were detected in on-site soil samples, a potential exists.

01 ☒ K. DAMAGE TO FAUNA
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED

Damage to fauna was not observed by FIT. Because TCL compounds and TAL analytes were detected in on-site soil samples not in fenced areas, a low potential exists.

01 ☐ L. CONTAMINATION OF FOOD CHAIN
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

This industrial site is not a habitat for wildlife.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES
04 NARRATIVE DESCRIPTION

02 ☒ OBSERVED (DATE: 2/7/89) ☐ POTENTIAL ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 33,431

04 NARRATIVE DESCRIPTION

Spilled titanium dioxide on the railroad spur to the west of the Olympic plant. Total Volume ~ 1 ft³

01 ☒ N. DAMAGE TO OFFSITE PROPERTY
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED

There is a potential for titanium dioxide to become airborne and leave the Olympic site to settle on off-site property. The damage from this however would be minimal.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

unknown

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

None observed by FIT

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None

II. TOTAL POPULATION POTENTIALLY AFFECTED: 33,431

IV. COMMENTS

None

V. SOURCES OF INFORMATION (List specific references, e.g., SSI file, sample analysis, reports)

- FIT SSI of the Olympic Plant 2/7/89
- Region V file information



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

IDENTIFICATION
01 STATE 02 SITE NUMBER
IL D085224186

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
<input checked="" type="checkbox"/> A. NPDES	IL0055565	11/13/77	6/30/80	non-contact cooling water
<input type="checkbox"/> B. UIC				
<input type="checkbox"/> C. AIR				
<input type="checkbox"/> D. RCRA				
<input type="checkbox"/> E. RCRA INTERIM STATUS				
<input type="checkbox"/> F. SPOC PLAN				
<input checked="" type="checkbox"/> G. STATE (Specify) Air	unknown	unknown	unknown	
<input type="checkbox"/> H. LOCAL (Specify)				
<input type="checkbox"/> I. OTHER (Specify)				
<input type="checkbox"/> J. NONE				

III. SITE DESCRIPTION

01 STORAGE/ DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE	04 TREATMENT (Check all that apply)	05 OTHER
<input type="checkbox"/> A. SURFACE IMPOUNDMENT			<input type="checkbox"/> A. INCINERATION	<input checked="" type="checkbox"/> A. BUILDINGS ON SITE
<input type="checkbox"/> B. PILES			<input type="checkbox"/> B. UNDERGROUND INJECTION	2
<input checked="" type="checkbox"/> C. DRUMS, ABOVE GROUND	~ 40	55 gal	<input type="checkbox"/> C. CHEMICAL/PHYSICAL	
<input type="checkbox"/> D. TANK, ABOVE GROUND			<input type="checkbox"/> D. BIOLOGICAL	
<input checked="" type="checkbox"/> E. TANK, BELOW GROUND	100,000	gal	<input type="checkbox"/> E. WASTE OIL PROCESSING	
<input type="checkbox"/> F. LANDFILL			<input type="checkbox"/> F. SOLVENT RECOVERY	
<input type="checkbox"/> G. LANDFARM			<input checked="" type="checkbox"/> G. OTHER RECYCLING/RECOVERY	
<input type="checkbox"/> H. OPEN DUMP			<input type="checkbox"/> H. OTHER (Specify)	
<input type="checkbox"/> I. OTHER (Specify)				

06 AREA OF SITE
5 1/4 Acres

07 COMMENTS

See Narrative 2.2, 2.3, and 3.3

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check all that apply)

☒ ① A. ADEQUATE, SECURE ☐ B. MODERATE ☒ ② C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DRUMS, UNITS, BARRIERS, ETC.

- ① Drums appear to be adequately contained. No evidence of leakage.
- ② Titanium Dioxide pile not contained.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☒ YES ☐ NO

02 COMMENTS

- ① Drums not accessible, in locked storage area.
- ② Titanium dioxide powder is easily accessible.

VI. SOURCES OF INFORMATION (List specific references, e.g., state files, company records, reports)

FIT site inspection 2/7/89

Region IV file information



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
IL D085224186

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check all applicable)	02 STATUS	03 DISTANCE TO SITE															
<table border="1"><tr><td>SURFACE</td><td>WELL</td></tr><tr><td>COMMUNITY A. <input type="checkbox"/></td><td>B. <input checked="" type="checkbox"/></td></tr><tr><td>NON-COMMUNITY C. <input type="checkbox"/></td><td>D. <input checked="" type="checkbox"/></td></tr></table>	SURFACE	WELL	COMMUNITY A. <input type="checkbox"/>	B. <input checked="" type="checkbox"/>	NON-COMMUNITY C. <input type="checkbox"/>	D. <input checked="" type="checkbox"/>	<table border="1"><tr><td>ENDANGERED</td><td>AFFECTED</td><td>MONITORED</td></tr><tr><td>A. <input type="checkbox"/></td><td>B. <input type="checkbox"/></td><td>C. <input checked="" type="checkbox"/></td></tr><tr><td>D. <input type="checkbox"/></td><td>E. <input type="checkbox"/></td><td>F. <input type="checkbox"/></td></tr></table>	ENDANGERED	AFFECTED	MONITORED	A. <input type="checkbox"/>	B. <input type="checkbox"/>	C. <input checked="" type="checkbox"/>	D. <input type="checkbox"/>	E. <input type="checkbox"/>	F. <input type="checkbox"/>	A. <u>1 1/4</u> (mi) B. <u>3/4</u> (mi)
SURFACE	WELL																
COMMUNITY A. <input type="checkbox"/>	B. <input checked="" type="checkbox"/>																
NON-COMMUNITY C. <input type="checkbox"/>	D. <input checked="" type="checkbox"/>																
ENDANGERED	AFFECTED	MONITORED															
A. <input type="checkbox"/>	B. <input type="checkbox"/>	C. <input checked="" type="checkbox"/>															
D. <input type="checkbox"/>	E. <input type="checkbox"/>	F. <input type="checkbox"/>															

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check all)

☒ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING
(Other sources available)
COMMERCIAL, INDUSTRIAL, IRRIGATION
(No other water sources available)

☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION
(Limited other sources available) ☐ D. NOT USED, UNUSABLE

02 POPULATION SERVED BY GROUND WATER: within 3 miles: ~675 on private wells, ~25,200 on municipal

03 DISTANCE TO NEAREST DRINKING WATER WELL: 3/4 (mi)

04 DEPTH TO GROUNDWATER: ~50-60 (ft)

05 DIRECTION OF GROUNDWATER FLOW: in shallow drift assumed SW

06 DEPTH TO AQUIFER OF CONCERN: ~50-60 (ft)

07 POTENTIAL YIELD OF AQUIFER: unk (gpd)

08 SOLE SOURCE AQUIFER: ☐ YES ☒ NO

09 DESCRIPTION OF WELLS (including usage, depth, and location relative to population and buildings)

See Narrative 5.2

10 RECHARGE AREA	COMMENTS	11 DISCHARGE AREA	COMMENTS
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	precipitation infiltration through permeable unconsolidated glacial deposits into Silurian dolomites	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

IV. SURFACE WATER

01 SURFACE WATER USE (Check all)

☒ A. RESERVOIR, RECREATION, DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME	AFFECTED	DISTANCE TO SITE
<u>unnamed creek west of site</u>	<input type="checkbox"/>	<u>50 ft</u>
<u>Fox River</u>	<input type="checkbox"/>	<u>1.0</u>
	<input type="checkbox"/>	

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN	02 DISTANCE TO NEAREST POPULATION						
<table border="1"><tr><td>ONE (1) MILE OF SITE</td><td>TWO (2) MILES OF SITE</td><td>THREE (3) MILES OF SITE</td></tr><tr><td>A. <u>~3447</u> NO. OF PERSONS</td><td>B. <u>~15651</u> NO. OF PERSONS</td><td>C. <u>~25875</u> NO. OF PERSONS</td></tr></table>	ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE	A. <u>~3447</u> NO. OF PERSONS	B. <u>~15651</u> NO. OF PERSONS	C. <u>~25875</u> NO. OF PERSONS	<u>on-site</u> (mi)
ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE					
A. <u>~3447</u> NO. OF PERSONS	B. <u>~15651</u> NO. OF PERSONS	C. <u>~25875</u> NO. OF PERSONS					
03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE <u>~5,400</u>	04 DISTANCE TO NEAREST OFF-SITE BUILDING <u>~200ft.</u>						

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

The area immediately surrounding the Olympic plant is industrial/storage. The cities of Geneva and Batavia are to the west. West Chicago is to the east. The area is developing quickly.



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
IL D085224186

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (sheet and

A. $10^{-4} - 10^{-5}$ cm/sec ☐ B. $10^{-4} - 10^{-4}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (sheet and

dolomite
☐ A. IMPERMEABLE ☐ B. RELATIVELY IMPERMEABLE ☒ C. RELATIVELY PERMEABLE ☐ D. VERY PERMEABLE
(Less than 10^{-4} cm/sec) ($10^{-4} - 10^{-4}$ cm/sec) ($10^{-3} - 10^{-4}$ cm/sec) (Greater than 10^{-3} cm/sec)

03 DEPTH TO BEDROCK

~50-60 (ft)

04 DEPTH OF CONTAMINATED SOIL ZONE

unknown (ft)

05 SOIL pH

unknown

06 NET PRECIPITATION

4.1 (in)

07 ONE YEAR 24 HOUR RAINFALL

2.45 (in)

08 SLOPE

43 %

DIRECTION OF SITE SLOPE

South - SW

TERRAIN AVERAGE SLOPE

~1.3 %

09 FLOOD POTENTIAL

SITE IS IN UNK. YEAR FLOODPLAIN

☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

NA

11 DISTANCE TO WETLANDS (if any identified)

ESTUARINE

A. N/A (ft)

OTHER

B. >3 (ft)

12 DISTANCE TO CRITICAL HABITAT (if endangered species)

>3 (ft)

ENDANGERED SPECIES: None

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL

A. 200' NW (ft)

RESIDENTIAL AREAS, NATIONAL/STATE PARKS,
FORESTS, OR WILDLIFE RESERVES

B. ~1/4 (ft)

AGRICULTURAL LANDS
PRIME AGRICULTURAL LAND AGRICULTURAL LAND

C. unknown (ft) D. 500' SW (ft)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

See Appendix A - 4-mile radius map

VII. SOURCES OF INFORMATION (For example: references, e.g., state files, company records, reports)

USGS Topographic Map - Geneva, IL quadrangle
FIT SSI of Olympic 2/7/89
Region V file information



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
IL D085224186

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	0		
SURFACE WATER	0		
WASTE	1	TCL compounds: EMS Labs. Indianapolis, IN TAL analytes: Vegas Analytical Las Vegas, NV	IN
AIR	0		
RUNOFF	0		
SPILL	0		
SOIL	6	TCL compounds: EMS Labs. Indianapolis, IN TAL analytes: Vegas Analytical Las Vegas, NV	IN
VEGETATION	0		
OTHER	N/A		

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
OVA 128	no readings above background
Radiation Mini Alert	no readings above background
Explosimeter	no readings above background

IV. PHOTOGRAPHS AND MAPS

01 TYPE <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> AERIAL	02 IN CUSTODY OF Ecology & Environment - Chicago
03 MAPS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	04 LOCATION OF MAPS Ecology & Environment - Chicago

V. OTHER FIELD DATA COLLECTED

None

VI. SOURCES OF INFORMATION

FIT SSI of the Olympic facility 2/7/89
Region IV file information



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D085224186

II. CURRENT OWNER(S)				PARENT COMPANY (if applicable)			
01 NAME Clorox Company		02 O+B NUMBER		01 NAME N/A		02 O+B NUMBER	
03 STREET ADDRESS (P.O. Box, Apt #, etc.) 1221 Broadway		04 SIC CODE		10 STREET ADDRESS (P.O. Box, Apt #, etc.)		11 SIC CODE	
05 CITY Oakland		06 STATE CA	07 ZIP CODE unk	12 CITY		13 STATE	14 ZIP CODE
01 NAME		02 O+B NUMBER		01 NAME		02 O+B NUMBER	
03 STREET ADDRESS (P.O. Box, Apt #, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, Apt #, etc.)		11 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	12 CITY		13 STATE	14 ZIP CODE
01 NAME		02 O+B NUMBER		01 NAME		02 O+B NUMBER	
03 STREET ADDRESS (P.O. Box, Apt #, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, Apt #, etc.)		11 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	12 CITY		13 STATE	14 ZIP CODE
01 NAME		02 O+B NUMBER		01 NAME		02 O+B NUMBER	
03 STREET ADDRESS (P.O. Box, Apt #, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, Apt #, etc.)		11 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	12 CITY		13 STATE	14 ZIP CODE
01 NAME		02 O+B NUMBER		01 NAME		02 O+B NUMBER	
03 STREET ADDRESS (P.O. Box, Apt #, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, Apt #, etc.)		11 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	12 CITY		13 STATE	14 ZIP CODE
III. PREVIOUS OWNER(S) (List each owner below)				IV. REALTY OWNER(S) (if applicable; list each owner below)			
01 NAME Comerco Inc.		02 O+B NUMBER		01 NAME N/A		02 O+B NUMBER	
03 STREET ADDRESS (P.O. Box, Apt #, etc.) no longer in existence		04 SIC CODE		03 STREET ADDRESS (P.O. Box, Apt #, etc.)		04 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	05 CITY		06 STATE	07 ZIP CODE
01 NAME		02 O+B NUMBER		01 NAME		02 O+B NUMBER	
03 STREET ADDRESS (P.O. Box, Apt #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, Apt #, etc.)		04 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	05 CITY		06 STATE	07 ZIP CODE
01 NAME		02 O+B NUMBER		01 NAME		02 O+B NUMBER	
03 STREET ADDRESS (P.O. Box, Apt #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, Apt #, etc.)		04 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	05 CITY		06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (List sources of information, e.g., owner files, sample analysis, reports)

FIT SSI 2/7/89
Region II file info.



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
IL D085224196

II. CURRENT OPERATOR <small>(Provide if different from owner)</small>				OPERATOR'S PARENT COMPANY <small>(If applicable)</small>			
01 NAME Olympic Stain		02 D+B NUMBER		10 NAME Clorox Company		11 D+B NUMBER	
03 STREET ADDRESS <small>(P.O. Box, Apt #, etc.)</small> 1020 Olympic Drive		04 SIC CODE		12 STREET ADDRESS <small>(P.O. Box, Apt #, etc.)</small> 1221 Broadway		13 SIC CODE	
05 CITY Batavia		06 STATE IL	07 ZIP CODE 60510	14 CITY Oakland		15 STATE CA	16 ZIP CODE
08 YEARS OF OPERATION 1977-1989 (present)		09 NAME OF OWNER					
III. PREVIOUS OPERATOR(S) <small>(List most recent first; provide only if different from owner)</small>				PREVIOUS OPERATORS' PARENT COMPANIES <small>(If applicable)</small>			
01 NAME N/A		02 D+B NUMBER		10 NAME N/A		11 D+B NUMBER	
03 STREET ADDRESS <small>(P.O. Box, Apt #, etc.)</small>		04 SIC CODE		12 STREET ADDRESS <small>(P.O. Box, Apt #, etc.)</small>		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					
01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS <small>(P.O. Box, Apt #, etc.)</small>		04 SIC CODE		12 STREET ADDRESS <small>(P.O. Box, Apt #, etc.)</small>		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					
01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS <small>(P.O. Box, Apt #, etc.)</small>		04 SIC CODE		12 STREET ADDRESS <small>(P.O. Box, Apt #, etc.)</small>		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					

IV. SOURCES OF INFORMATION (List specific references, e.g., state files, company records, reports)

- FIT SSI 2/7/89
- Region V file information



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D0852241PL

II. ON-SITE GENERATOR

01 NAME N/A	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, Apt #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME N/A	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, Apt #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, Apt #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE	05 CITY	06 STATE 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, Apt #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, Apt #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE	05 CITY	06 STATE 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME N/A	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, Apt #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, Apt #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE	05 CITY	06 STATE 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, Apt #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, Apt #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE	05 CITY	06 STATE 07 ZIP CODE

V. SOURCES OF INFORMATION (City, county, reference, e.g., state, local, company, analyst, reporter)

File info. Region V



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

L IDENTIFICATION
01 STATE 02 SITE NUMBER
IL D085224186

K. PAST RESPONSE ACTIVITIES

01 <input type="checkbox"/> A. WATER SUPPLY CLOSED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> B. TEMPORARY WATER SUPPLY PROVIDED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> C. PERMANENT WATER SUPPLY PROVIDED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> D. SPILLED MATERIAL REMOVED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> E. CONTAMINATED SOIL REMOVED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> F. WASTE REPACKAGED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> G. WASTE DISPOSED ELSEWHERE 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> H. ON SITE BURIAL 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> I. IN SITU CHEMICAL TREATMENT 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> J. IN SITU BIOLOGICAL TREATMENT 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> K. IN SITU PHYSICAL TREATMENT 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> L. ENCAPSULATION 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> M. EMERGENCY WASTE TREATMENT 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> N. CUTOFF WALLS 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> O. EMERGENCY DRAIN/SURFACE WATER DIVERSION 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> P. CUTOFF TRENCH/SUMP 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> Q. SUBSURFACE CUTOFF WALL 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D085 224/86

II. PAST RESPONSE ACTIVITIES

01 ☐ R. BARRIER WALLS CONSTRUCTED

02 DATE _____

03 AGENCY _____

04 DESCRIPTION

N/A

01 ☐ S. CAPPING/COVERING

02 DATE _____

03 AGENCY _____

04 DESCRIPTION

N/A

01 ☐ T. BULK TANKAGE REPAIRED

02 DATE _____

03 AGENCY _____

04 DESCRIPTION

N/A

01 ☐ U. GROUT CURTAIN CONSTRUCTED

02 DATE _____

03 AGENCY _____

04 DESCRIPTION

N/A

01 ☐ V. BOTTOM SEALED

02 DATE _____

03 AGENCY _____

04 DESCRIPTION

N/A

01 ☐ W. GAS CONTROL

02 DATE _____

03 AGENCY _____

04 DESCRIPTION

N/A

01 ☐ X. FIRE CONTROL

02 DATE _____

03 AGENCY _____

04 DESCRIPTION

N/A

01 ☐ Y. LEACHATE TREATMENT

02 DATE _____

03 AGENCY _____

04 DESCRIPTION

N/A

01 ☐ Z. AREA EVACUATED

02 DATE _____

03 AGENCY _____

04 DESCRIPTION

N/A

01 ☐ 1. ACCESS TO SITE RESTRICTED

02 DATE _____

03 AGENCY _____

04 DESCRIPTION

N/A

01 ☐ 2. POPULATION RELOCATED

02 DATE _____

03 AGENCY _____

04 DESCRIPTION

N/A

01 ☐ 3. OTHER REMEDIAL ACTIVITIES

02 DATE _____

03 AGENCY _____

04 DESCRIPTION

None

III. SOURCES OF INFORMATION (List specific references, e.g., state files, company analysis, reports)

File Info. Region V



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE IL	02 SITE NUMBER D085224186

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☒ YES ☐ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

A RCRA inspection of the Olympic facility was conducted on 12/4/81 by the Illinois EPA.

III. SOURCES OF INFORMATION (One specific reference, e.g., state files, sample analysis, response)

Region I file information

APPENDIX C

FIT SITE PHOTOGRAPHS

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: COMERCO INC. OLYMPIC STAIN DIV.PAGE 1 OF 18U.S. EPA ID: ILD085224186 TDD: F05-8711-048PAN: FIL0129SBDATE: > 2/7/89TIME: > 1130DIRECTION OF
PHOTOGRAPH:> N

WEATHER

CONDITIONS:

> sunny, 8°F> W-SW winds 10mph

PHOTOGRAPHED BY:

> Bill Schaefer

SAMPLE ID

(if applicable):

> S1DESCRIPTION: > close-up view of soil sample S1 location. Notice
> stains on building wall.DATE: > 2/7/89TIME: > 1130DIRECTION OF
PHOTOGRAPH:> N

WEATHER

CONDITIONS:

> sunny 8°F>

PHOTOGRAPHED BY:

> Schaefer

SAMPLE ID

(if applicable):

> S1DESCRIPTION: > perspective of soil sample S1.>

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: COMERCO INC. OLYMPIC STAIN DIV.PAGE 2 OF 18U.S. EPA ID: ILD085224186 TDD: F05-8711-048PAN: FIL0129SBDATE: > 2/7/89TIME: > 1145DIRECTION OF
PHOTOGRAPH:> W

WEATHER

CONDITIONS:

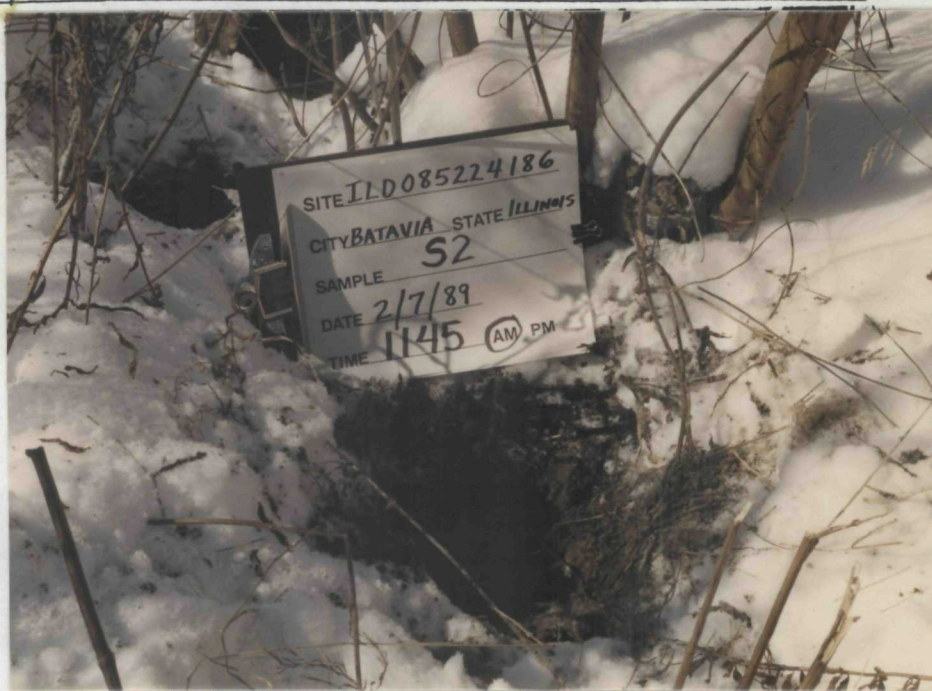
> sunny, 8°F> W-SW winds 10mph

PHOTOGRAPHED BY:

> Bill Schaefer

SAMPLE ID

(if applicable):

> S2DESCRIPTION: > close-up of soil sample S2 location.>DATE: > 2/7/89TIME: > 1145DIRECTION OF
PHOTOGRAPH:> W

WEATHER

CONDITIONS:

> sunny, 8°F>

PHOTOGRAPHED BY:

> Bill Schaefer

SAMPLE ID

(if applicable):

> S2DESCRIPTION: > perspective view of S2 location.>

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: COMERCO INC. OLYMPIC STAIN DIV.

PAGE 3 OF 18

U.S. EPA ID: ILD085224186 TDD: F05-8711-048

PAN: FIL0129SB

DATE: > 2/7/89

TIME: > 1220

DIRECTION OF
PHOTOGRAPH:
> SE

WEATHER
CONDITIONS:
> sunny, 80°F

> W-SW winds 10mph

PHOTOGRAPHED BY:
> Bill Schaefer

SAMPLE ID
(if applicable):
> S3



DESCRIPTION: > close-up view of sediment sample S3 location.

>

DATE: > 2/7/89

TIME: > 1220

DIRECTION OF
PHOTOGRAPH:
> SE

WEATHER
CONDITIONS:
> sunny, 80°F

>

PHOTOGRAPHED BY:
> Schaefer

SAMPLE ID
(if applicable):
> S3



DESCRIPTION: > perspective view of S3 location. Note outfall
> from Olympic Plant.

SITE NAME: COMERCO INC. OLYMPIC STAIN DIV.PAGE 4 OF 18U.S. EPA ID: ILD085224186 TDD: F05-8711-048PAN: FIL0129SBDATE: > 2/7/89TIME: > 1255DIRECTION OF
PHOTOGRAPH:> E

WEATHER

CONDITIONS:

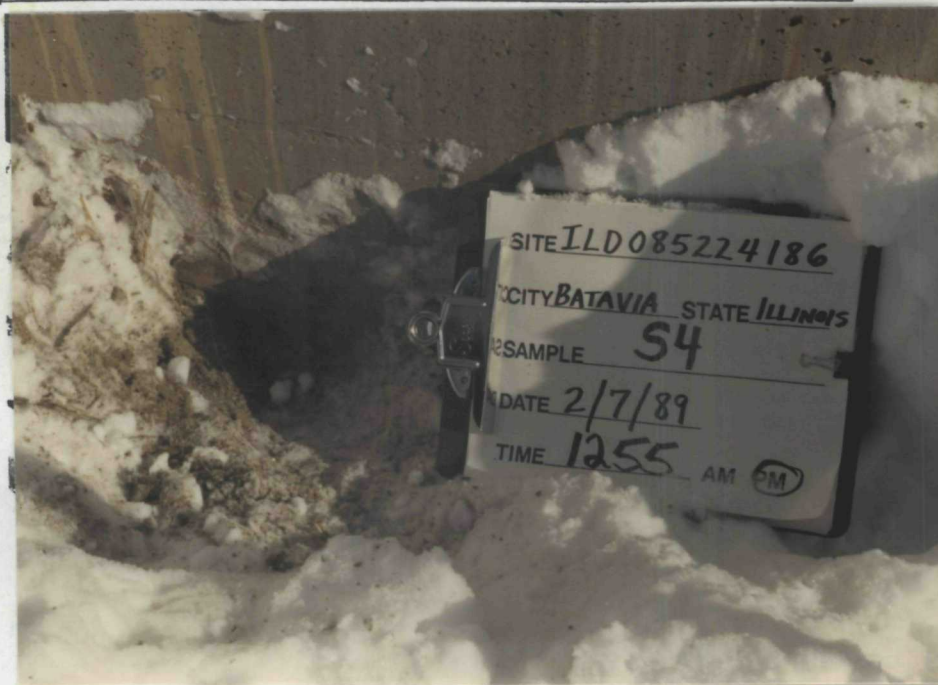
> sunny, 8°F> W-SW winds 10mph

PHOTOGRAPHED BY:

> Bill Schaefer

SAMPLE ID

(if applicable):

> S4DESCRIPTION: > close-up view of soil sample S4 location.>DATE: > 2/7/89TIME: > 1255DIRECTION OF
PHOTOGRAPH:> E

WEATHER

CONDITIONS:

> Sunny, 8°F>

PHOTOGRAPHED BY:

> Bill Schaefer

SAMPLE ID

(if applicable):

> S4DESCRIPTION: > Perspective of S4 location. Note paint> stain on concrete.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: COMERCO INC. OLYMPIC STAIN DIV.

PAGE 5 OF 18

U.S. EPA ID: ILD085224186

TDD: F05-8711-048

PAN: FIL0129SB

DATE: > 2/7/89

TIME: > 1320

DIRECTION OF
PHOTOGRAPH:

> E

WEATHER
CONDITIONS:

> Sunny, 8°F

> W-SW winds 10mph

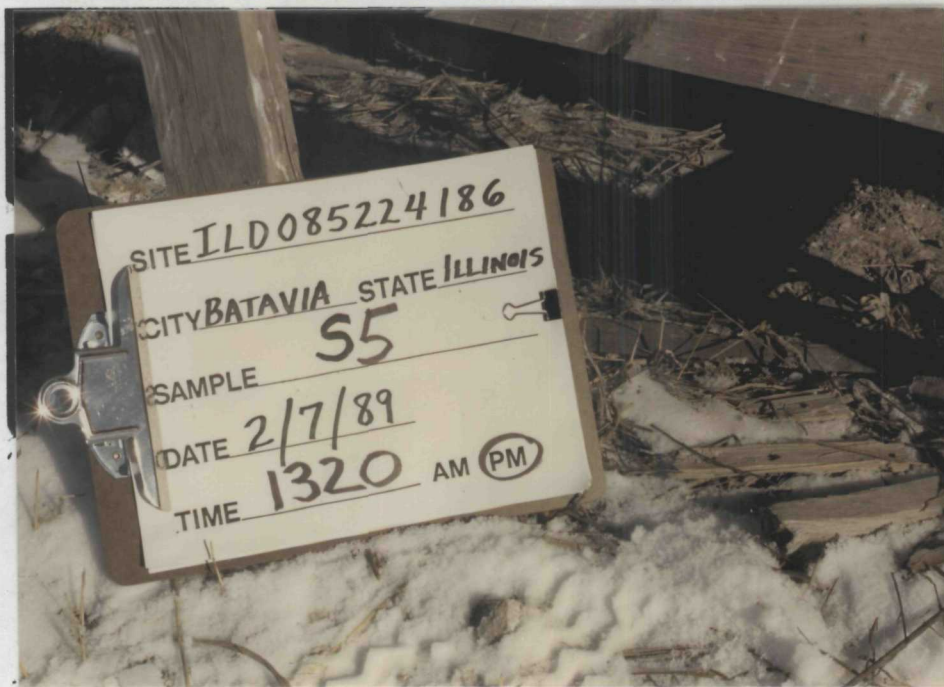
PHOTOGRAPHED BY:

> Bill Schaefer

SAMPLE ID

(if applicable):

> S5



DESCRIPTION: > close-up view of soil sample S5 location.

> S5 was collected underneath loading docks Nos. 2 and 3 on the West side of the manufacturing building.

Note:

Perspective view photograph of **S5** was too blurred to include in the photo log.

SITE NAME: COMERCO INC. OLYMPIC STAIN DIV.PAGE 6 OF 18U.S. EPA ID: ILD085224186 TDD: F05-8711-048PAN: FIL0129SBDATE: > 2/7/89TIME: > 1345DIRECTION OF
PHOTOGRAPH:> NE

WEATHER

CONDITIONS:

> sunny, 80°F> W-SW winds 10mph

PHOTOGRAPHED BY:

> Bill Schaefer

SAMPLE ID

(if applicable):

> S6

DESCRIPTION: > Soil (Waste) sample S6 was collected from material
> found spilled underneath this tanker car. See Below

DATE: > 2/7/89TIME: > 1345DIRECTION OF
PHOTOGRAPH:> NE

WEATHER

CONDITIONS:

> 80°F, Sunny>

PHOTOGRAPHED BY:

> Schaefer

SAMPLE ID

(if applicable):

> S6

DESCRIPTION: > sample S6 was collected from the pile of
> whitish powder located beneath the tanker car between the
two rails.



FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: COMERCO INC. OLYMPIC STAIN DIV.PAGE 7 OF 18U.S. EPA ID: ILD085224186 TDD: F05-8711-048PAN: FIL0129SBDATE: > 2/7/89TIME: > 1405DIRECTION OF
PHOTOGRAPH:> WWEATHER
CONDITIONS:> sunny, 8°F> W-SW winds 10mph

PHOTOGRAPHED BY:

> Bill SchaeferSAMPLE ID
(if applicable):> S7

DESCRIPTION: > close-up view of potential background sample
> S7 location. Sample S7 was collected from a wooded area
Southwest of the Olympic site.

DATE: > 2/7/89TIME: > 1405DIRECTION OF
PHOTOGRAPH:> WWEATHER
CONDITIONS:> Sunny, 8°F>

PHOTOGRAPHED BY:

> SchaeferSAMPLE ID
(if applicable):> S7

DESCRIPTION: > Perspective view of soil sample S7 location.

>

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: COMERCO INC. OLYMPIC STAIN DIV.PAGE 8 OF 18U.S. EPA ID: ILD085224186TDD: F05-8711-048PAN: FIL01295EDATE: > 2/7/89 TIME: > 1415 DIRECTION OF PHOTOGRAPH: > N PHOTOGRAPHED BY: > Bill SchaeferWEATHER CONDITIONS: > Sunny, 8°F, W-SW winds ~10mph SAMPLE ID (if applicable): > N/ADESCRIPTION: > perspective photo showing southwest corner of Olympic manufacturing building.

Note drums, pallets and tanks to right. The three loading docks on the building's west side are visible. The snowy area between the telephone lines and the railroad track which runs adjacent to the building is the location of the now removed eight underground storage tanks. Facility to the far left is not part of Olympic. Snow covered hill in left background is a landfill operated by Waste Management, Inc.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: COMERCO INC. OLYMPIC STAIN DIV.

PAGE 9 OF 18

U.S. EPA ID: 1LD085224186 TDD: F05-8711-048

PAN: FIL0129SB

DATE: > 2/7/89

TIME: > 1420

DIRECTION OF
PHOTOGRAPH:

> E

WEATHER
CONDITIONS:

> sunny, 80°F

> W-SW winds 10mph

PHOTOGRAPHED BY:

> Bill Schaefer

SAMPLE ID

(if applicable):

> N/A

DESCRIPTION: > loading dock No. 3 on building's west side.

>



DATE: > 2/7/89

TIME: > 1420

DIRECTION OF
PHOTOGRAPH:

> E

WEATHER
CONDITIONS:

> 80°F, sunny

>

PHOTOGRAPHED BY:

> Schaefer

SAMPLE ID

(if applicable):

> N/A

DESCRIPTION: > loading dock No. 2 also on building's west side.

> Note stains on concrete.



FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: COMERCO INC. OLYMPIC STAIN DIV.

PAGE 10 OF 18

U.S. EPA ID: ILD085224186 TDD: F05-8711-048

PAN: FIL0129SB

DATE: > 2/7/89

TIME: > 1425

DIRECTION OF
PHOTOGRAPH:

> E

WEATHER

CONDITIONS:

> sunny, 80°F

> W-SW winds 10mph

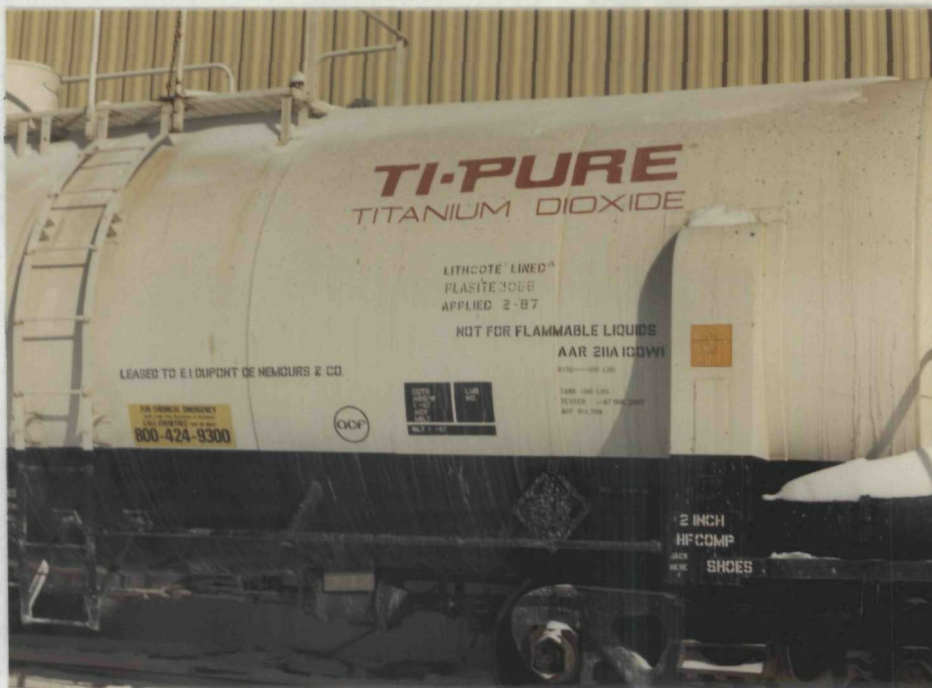
PHOTOGRAPHED BY:

> Bill Schaefer

SAMPLE ID

(if applicable):

> N/A



DESCRIPTION: > close-up of side of tanker car on railroad

> tracks which run along west side of building.

DATE: > 2/7/89

TIME: > 1430

DIRECTION OF
PHOTOGRAPH:

> S

WEATHER

CONDITIONS:

> 80°F, sunny

>

PHOTOGRAPHED BY:

> Schaefer

SAMPLE ID

(if applicable):

> N/A



DESCRIPTION: > photograph of the manufacturing building's Northwest

> Corner. Note that tanker car is same as pictured above. Four active underground storage tanks are present under the asphalt approach to the loading dock.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: COMERCO INC. OLYMPIC STAIN DIV.

PAGE 11 OF 18

U.S. EPA ID: ILD085224186 TDD: F05-8711-048

PAN: FIL0129SB

DATE: > 2/7/89

TIME: > 1430

DIRECTION OF
PHOTOGRAPH:
> S

WEATHER
CONDITIONS:
> sunny, 8°F

> W-SW winds 10mph

PHOTOGRAPHED BY:
> Bill Schaefer

SAMPLE ID
(if applicable):
> N/A



DESCRIPTION: > Front entrance of the Olympic facility. This is
> located on north side of the building.

DATE: > 2/7/89

TIME: > 1430

DIRECTION OF
PHOTOGRAPH:
> SE

WEATHER
CONDITIONS:
> 8°F sunny

>

PHOTOGRAPHED BY:
> Schaefer

SAMPLE ID
(if applicable):
> N/A



DESCRIPTION: > Northeast section of the Olympic warehouse.

>

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: COMERCO INC. OLYMPIC STAIN DIV.

PAGE 12 OF 18

U.S. EPA ID: 1LD085224186

TDD: F05-8711-048

PAN: FIL01295B

DATE: > 2/7/89

TIME: > 1435

DIRECTION OF
PHOTOGRAPH:

> SW

WEATHER

CONDITIONS:

> Sunny, 8°F

> W-SW winds 10mph

PHOTOGRAPHED BY:

> Bill Schaefer

SAMPLE ID

(if applicable):

> N/A



DESCRIPTION: > East side of the Olympic warehouse.

>

SITE NAME: COMERCO INC. OLYMPIC STAIN DIV.PAGE 13 OF 18U.S. EPA ID: ILD085224186 TDD: F05-8711-048PAN: FIL0129SBDATE: > 2/7/89TIME: > 1445DIRECTION OF
PHOTOGRAPH:> NWEATHER
CONDITIONS:> sunny, 8°F> W-SW winds 10mph

PHOTOGRAPHED BY:

> Bill SchaeferSAMPLE ID
(if applicable):> N/ADESCRIPTION: > pallets on south side of Olympic building.

>

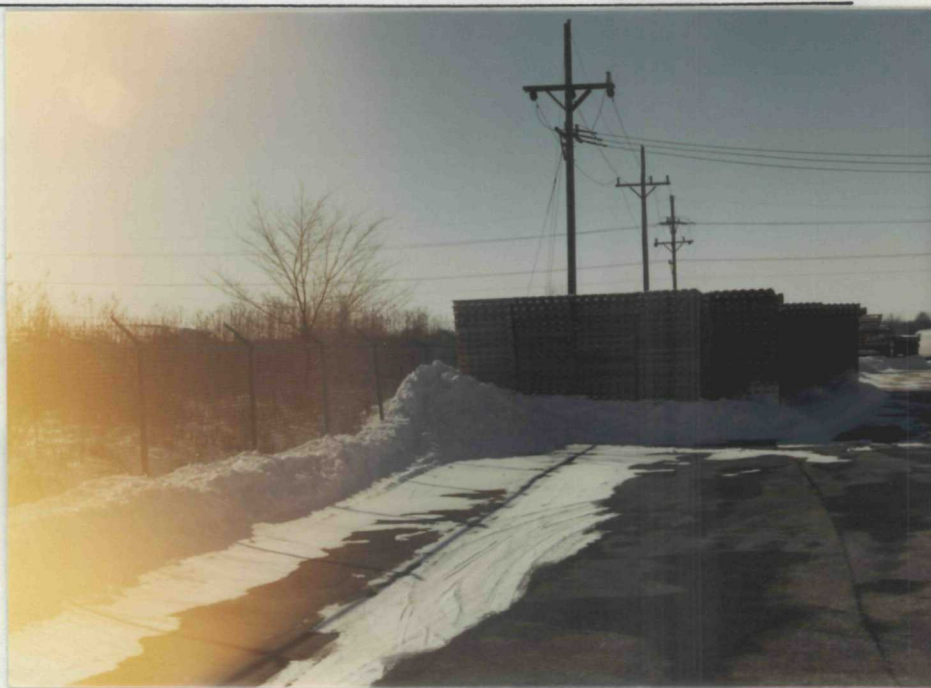
DATE: > 2/7/89TIME: > 1445DIRECTION OF
PHOTOGRAPH:> WWEATHER
CONDITIONS:> 8°F, sunny

>

PHOTOGRAPHED BY:

> SchaeferSAMPLE ID
(if applicable):> N/ADESCRIPTION: > pallets stacked along south fence line.

>



SITE NAME: COMERCO INC. OLYMPIC STAIN DIV.PAGE 14 OF 18U.S. EPA ID: ILD085224186 TDD: F05-8711-048PAN: FIL0129SBDATE: > 2/7/89TIME: > 1445DIRECTION OF
PHOTOGRAPH:> NW

WEATHER

CONDITIONS:

> sunny, 80°F> W-SW winds 10mph

PHOTOGRAPHED BY:

> Bill Schaefer

SAMPLE ID

(if applicable):

> N/ADESCRIPTION: > Flammable liquid storage shed. Gasoline
> and oils are stored here.DATE: > 2/7/89TIME: > 1450DIRECTION OF
PHOTOGRAPH:> W

WEATHER

CONDITIONS:

> 80°F, sunny>

PHOTOGRAPHED BY:

> Schaefer

SAMPLE ID

(if applicable):

> N/ADESCRIPTION: > The smaller of two drum storage areas. Both areas
> are on the concrete pad which exists to the south of the
Olympic manufacturing/warehouse building.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: COMERCO INC. OLYMPIC STAIN DIV.

PAGE 15 OF 18

U.S. EPA ID: ILD085224186

TDD: F05-8711-048

PAN: FIL012956



DATE: > 2/7/89 TIME: > 1450 DIRECTION OF PHOTOGRAPH: > SE PHOTOGRAPHED BY: > Bill Schaefer

WEATHER CONDITIONS: > Sunny, 8°F, W-SW winds ~10mph SAMPLE ID (if applicable): > N/A

DESCRIPTION: > Drum storage area. The drums are elevated on pallets. There was no visual evidence of leakage. The following 3 pages contain photographs of labels on these drums.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: COMERCO INC. OLYMPIC STAIN DIV.

PAGE 16 OF 18

U.S. EPA ID: ILD085224186 TDD: F05-8711-048

PAN: FIL0129SB

DATE: > 2/7/89

TIME: > 1455

DIRECTION OF
PHOTOGRAPH:

> W

WEATHER

CONDITIONS:

> sunny, 80°F

> W-SW winds 10mph

PHOTOGRAPHED BY:

> Bill Schaefer

SAMPLE ID

(if applicable):

> N/A



DESCRIPTION: > drum label - slip-ayd SL-300

>

DATE: > 2/7/89

TIME: > 1455

DIRECTION OF
PHOTOGRAPH:

> E

WEATHER

CONDITIONS:

> 80°F, Sunny

>

PHOTOGRAPHED BY:

> Schaefer

SAMPLE ID

(if applicable):

> N/A



DESCRIPTION: > drum label - Acrysol

>

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: COMERCO INC. OLYMPIC STAIN DIV.

PAGE 17 OF 18

U.S. EPA ID: ILD085224/186 TDD: F05-8711-048

PAN: FIL0129SB

DATE: > 2/7/89

TIME: > 1455

DIRECTION OF PHOTOGRAPH:

> S

WEATHER

CONDITIONS:

> sunny, 80°F

> W-SW winds 10mph

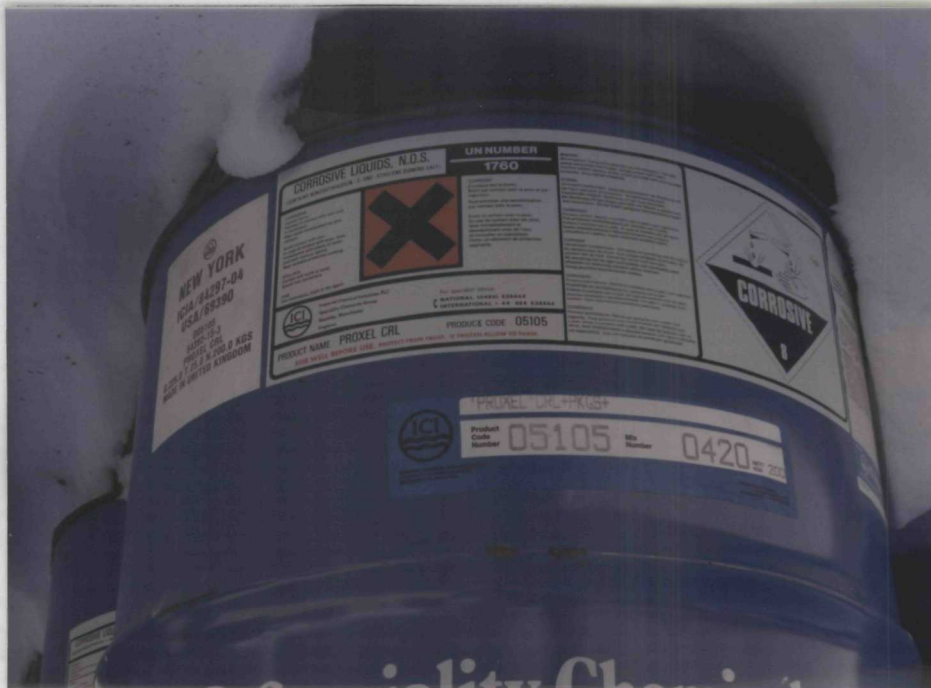
PHOTOGRAPHED BY:

> Bill Schaefer

SAMPLE ID

(if applicable):

> N/A



DESCRIPTION: > drum label - proxel CRL

>

DATE: > 2/7/89

TIME: > 1455

DIRECTION OF PHOTOGRAPH:

> SE

WEATHER

CONDITIONS:

> 80°F, sunny

>

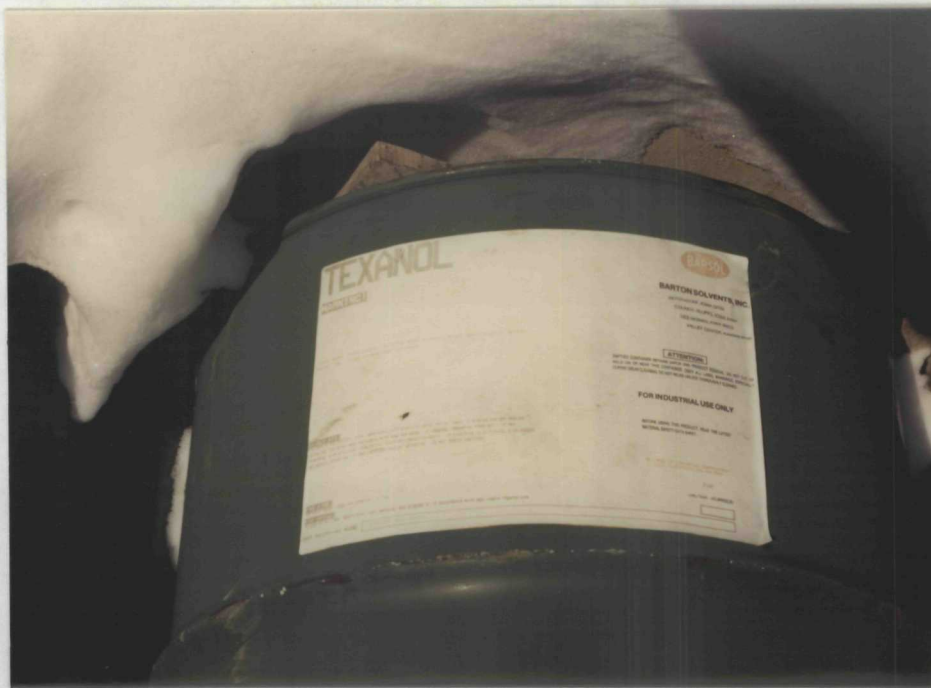
PHOTOGRAPHED BY:

> Schaefer

SAMPLE ID

(if applicable):

> N/A



DESCRIPTION: > drum label - Texanol

>

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: COMERCO INC. OLYMPIC STAIN DIV.

PAGE 18 OF 18

U.S. EPA ID: ILD085224186

TDD: F05-8711-048

PAN: FIL0129SB

DATE: > 2/7/89

TIME: > 1500

DIRECTION OF
PHOTOGRAPH:

> S

WEATHER
CONDITIONS:

> Sunny, 8°F

> W-SW winds 10mph

PHOTOGRAPHED BY:

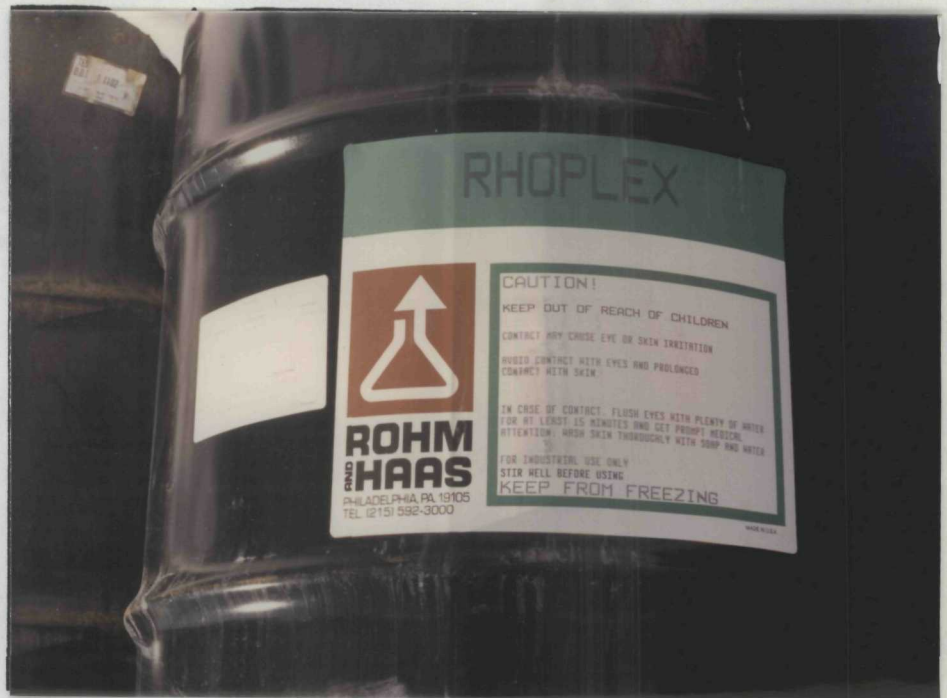
> Bill Schaefer

SAMPLE ID
(if applicable):

> N/A

DESCRIPTION: > drum label - Rhoplex

>



APPENDIX D

U.S. EPA TARGET COMPOUND LIST AND
TARGET ANALYTE LIST
QUANTITATION/DETECTION LIMITS

Contract Laboratory Program
Target Compound List
Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
Chloromethane	74-87-3	10 ug/L	10 ug/Kg
Bromomethane	74-83-9	10	10
Vinyl chloride	75-01-4	10	10
Chloroethane	75-00-3	10	10
Methylene chloride	75-09-2	5	5
Acetone	67-64-1	10	5
Carbon disulfide	75-15-0	5	5
1,1-dichloroethene	75-35-4	5	5
1,1-dichloroethane	75-34-3	5	5
1,2-dichloroethene (total)	540-59-0	5	5
Chloroform	67-66-3	5	5
1,2-dichloroethane	107-06-2	5	5
2-butanone (MEK)	78-93-3	10	10
1,1,1-trichloroethane	71-55-6	5	5
Carbon tetrachloride	56-23-5	5	5
Vinyl acetate	108-05-4	10	10
Bromodichloromethane	75-27-4	5	5
1,2-dichloropropane	78-87-5	5	5
cis-1,3-dichloropropene	10061-01-5	5	5
Trichloroethene	79-01-6	5	5
Dibromochloromethane	124-48-1	5	5
1,1,2-trichloroethane	79-00-5	5	5
Benzene	71-43-2	5	5
Trans-1,3-dichloropropene	10061-02-6	5	5
Bromoform	75-25-2	5	5
4-Methyl-2-pentanone	108-10-1	10	10
2-Hexanone	591-78-6	10	10
Tetrachloroethene	127-18-4	5	5
Toluene	108-88-3	5	5
1,1,2,2-tetrachloroethane	79-34-5	5	5
Chlorobenzene	108-90-7	5	5
Ethyl benzene	100-41-4	5	5
Styrene	100-42-5	5	5
Xylenes (total)	1330-20-7	5	5

Table A
Contract Laboratory Program
Target Compound List
Semivolatiles Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
Phenol	108-95-2	10 ug/L	330 ug/Kg
bis(2-Chloroethyl) ether	111-44-4	10	330
2-Chlorophenol	95-57-8	10	330
1,3-Dichlorobenzene	541-73-1	10	330
1,4-Dichlorobenzene	106-46-7	10	330
Benzyl Alcohol	100-51-6	10	330
1,2-Dichlorobenzene	95-50-1	10	330
2-Methylphenol	95-48-7	10	330
bis(2-Chloroisopropyl) ether	108-60-1	10	330
4-Methylphenol	106-44-5	10	330
N-Nitroso-di-n-dipropylamine	621-64-7	10	330
Hexachloroethane	67-72-1	10	330
Nitrobenzene	98-95-3	10	330
Isophorone	78-59-1	10	330
2-Nitrophenol	88-75-5	10	330
2,4-Dimethylphenol	105-67-9	10	330
Benzoic Acid	65-85-0	50	1600
bis(2-Chloroethoxy) methane	111-91-1	10	330
2,4-Dichlorophenol	120-83-2	10	330
1,2,4-Trichlorobenzene	120-82-1	10	330
Naphthalene	91-20-3	10	330
4-Chloroaniline	106-47-8	10	330
Hexachlorobutadiene	87-68-3	10	300
4-Chloro-3-methylphenol	59-50-7	10	330
2-Methylnaphthalene	91-57-6	10	330
Hexachlorocyclopentadiene	77-47-4	10	330
2,4,6-Trichlorophenol	88-06-2	10	330
2,4,5-Trichlorophenol	95-95-4	50	1600
2-Chloronaphthalene	91-58-7	10	330
2-Nitroaniline	88-74-4	50	1600
Dimethylphthalate	131-11-3	10	330
Acenaphthylene	208-96-8	10	330
2,6-Dinitrotoluene	606-20-2	10	330
3-Nitroaniline	99-09-2	50	1600
Acenaphthene	83-32-9	10	330
2,4-Dinitrophenol	51-28-5	50	1600
4-Nitrophenol	100-02-7	50	1600
Dibenzofuran	132-64-9	10	330
2,4-Dinitrotoluene	121-14-2	10	330
Diethylphthalate	84-66-2	10	330
4-Chlorophenyl-phenyl ether	7005-72-3	10	330

Table A
Contract Laboratory Program
Target Compound List
Semivolatiles Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SLUDGE SEDIMENT
Fluorene	86-73-7	10 ug/L	330 ug/Kg
4-Nitroaniline	100-01-6	50	1600
4,6-Dinitro-2-methylphenol	534-52-1	50	1600
N-nitrosodiphenylamine	86-30-6	10	330
4-Bromophenyl-phenylether	101-55-3	10	330
Hexachlorobenzene	118-74-1	10	330
Pentachlorophenol	87-86-5	50	1600
Phenanthrene	85-01-8	10	330
Anthracene	120-12-7	10	330
Di-n-butylphthalate	84-74-2	10	330
Fluoranthene	206-44-0	10	330
Pyrene	129-00-0	10	330
Butylbenzylphthalate	85-68-7	10	330
3,3'-Dichlorobenzidine	91-94-1	20	660
Benzo(a)anthracene	56-55-3	10	330
Chrysene	218-01-9	10	330
bis(2-Ethylhexyl)phthalate	117-81-7	10	330
Di-n-octylphthalate	117-84-0	10	330
Benzo(b)fluoranthene	205-99-2	10	330
Benzo(k)fluoranthene	207-08-9	10	330
Benzo(a)pyrene	50-32-8	10	330
Indeno(1,2,3-cd)pyrene	193-39-5	10	330
Dibenz(a,h)anthracene	53-70-3	10	330
Benzo(g,h,i)perylene	191-24-2	10	330

Table A
Contract Laboratory Program
Target Compound List
Pesticide and PCB Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
alpha-BHC	319-84-6	0.05 ug/L	8 ug/Kg
beta-BHC	319-85-7	0.05	8
delta-BHC	319-86-8	0.05	8
gamma-BHC (Lindane)	58-89-9	0.05	8
Heptachlor	76-44-8	0.05	8
Aldrin	309-00-2	0.05	8
Heptachlor epoxide	1024-57-3	0.05	8
Endosulfan I	959-98-8	0.05	8
Dieldrin	60-57-1	0.10	16
4,4'-DDE	72-55-9	0.10	16
Endrin	72-20-8	0.10	16
Endosulfan II	33213-65-9	0.10	16
4,4'-DDD	72-54-8	0.10	16
Endosulfan sulfate	1031-07-8	0.10	16
4,4'-DDT	50-29-3	0.10	16
Methoxychlor (Mariate)	72-43-5	0.5	80
Endrin ketone	53494-70-5	0.10	16
alpha-Chlordane	5103-71-9	0.5	80
gamma-chlordane	5103-74-2	0.5	80
Toxaphene	8001-35-2	1.0	160
AROCLOR-1016	12674-11-2	0.5	80
AROCLOR-1221	11104-28-2	0.5	80
AROCLOR-1232	11141-16-5	0.5	80
AROCLOR-1242	53469-21-9	0.5	80
AROCLOR-1248	12672-29-6	0.5	80
AROCLOR-1254	11097-69-1	1.0	160
AROCLOR-1260	11096-82-5	1.0	160

Table A
Contract Laboratory Program
Target Analyte List
Inorganic Quantitation Limits

COMPOUND	PROCEDURE	SOIL WATER	SEDIMENT SLUDGE
Aluminum	ICP	200 ug/L	40 mg/Kg
Antimony	Furnace	60	2.4
Arsenic	Furnace	10	2
Barium	ICP	200	40
Beryllium	ICP	5	1
Cadmium	ICP	5	1
Calcium	ICP	5000	1000
Chromium	ICP	10	2
Cobalt	ICP	50	10
Copper	ICP	25	5
Iron	ICP	100	20
Lead	Furnace	5	1
Magnesium	ICP	5000	1000
Manganese	ICP	15	3
Mercury	Cold Vapor	0.2	0.008
Nickel	ICP	40	8
Potassium	ICP	5000	1000
Selenium	Furnace	5	1
Silver	ICP	10	2
Sodium	ICP	5000	1000
Thallium	Furnace	10	2
Vanadium	ICP	50	10
Zinc	ICP	20	4
Cyanide	Color	10	2

APPENDIX E

WELL LOGS OF THE AREA OF THE SITE

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

White Copy -
Ill. Dept. of Public Health
Yellow Copy - Well Contractor
Blue Copy - Well Owner

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well

- a. Dug____. Bored____. Hole Diam. 5 in. Depth____ ft.
Curb material____. Buried Slab: Yes____ No____
b. Driven____. Drive Pipe Diam. 5" in. Depth 160 ft.
c. Drilled X. Finished in Drift____. In Rock 100.
Tubular____. Gravel Packed____.
d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:

Building 10 Ft. Seepage Tile Field____
Cess Pool____ Sewer (non Cast iron)____
Privy____ Sewer (Cast iron)____
Septic Tank 100 Barnyard____
Leaching Pit____ Manure Pile____

3. Well furnishes water for human consumption? Yes X No____

4. Date well completed NOV. 81

5. Permanent Pump Installed? Yes X Date____ No____

Manufacturer____ Type____ Location____

Capacity____ gpm. Depth of Setting____ Ft.

6. Well Top Sealed? Yes X No____ Type____

7. Pitless Adapter Installed? Yes X No____

Manufacturer____ Model Number____

How attached to casing?____

8. Well Disinfected? Yes X No____

9. Pump and Equipment Disinfected? Yes X No____

10. Pressure Tank Size____ gal. Type____

Location____

11. Water Sample Submitted? Yes X No____

REMARKS:

NOT
A
RES. WELL

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Waste Mng. Well No. 3
Address Geneva IL.
Driller Bill Weirich License No. 091-006568
11. Permit No. 101639 Date OCT 81
12. Water from Limestone 13. County Kane
at depth____ to____ ft. Sec. 11.25
14. Screen: Diam.____ in. Twp. 34 N
Length:____ ft. Slot____ Rge. 8 E
Elev.____

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)

SHOW
LOCATION IN
SECTION PLAT
NW SE NE

16. Size Hole below casing: 5 in. (included a commercial operation - washroom
17. Static level 75 ft. below casing top which is 2 ft. above ground level. Pumping level 75 ft. when pumping at 10 gpm for 10 hours. for large machinery

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Drift	0-60	
white limestone	60-150	150

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Bill Weirich DATE 3-15-82

INSTRUCTIONS TO DRILLERS

White C
Ill. D. of Public Health
Yellow Copy - Well Contractor
Blue Copy - Well Owner

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 616, STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL / WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

2

1/67

ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

1. Type of Well

- a. Dug ☐ Bored ☐ Hole Diam. in. Depth ft.
Curb material Buried Slab: Yes ☐ No ☐
- b. Driven ☒ Drive Pipe Diam. 5 in. Depth 100 ft.
- c. Drilled ☒ Finished in Drift ☐ In Rock ☒
Tubular ☐ Gravel Packed ☐
- d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
NONE		

2. Distance to Nearest:

Building 25 Ft. Seepage Tile Field: 75
Cess Pool ☐ Sewer (non Cast iron) ☐
Privy ☐ Sewer (Cast iron) ☐
Septic Tank 25 Barnyard ☐
Leaching Pit ☐ Manure Pile ☐

3. Is water from this well to be used for human consumption?

Yes ☒ No ☐

4. Date well completed: 8-27-68

5. Permanent Pump Installed? Yes ☒ No ☐
Manufacturer BEDA Type SLUB
Capacity 10 gpm. Depth of setting 72 ft.

6. Well Top Sealed? Yes ☒ No ☐

7. Pitless Adaptor Installed? Yes ☒ No ☐

8. Well Disinfected? Yes ☒ No ☐

9. Water Sample Submitted? Yes ☒ No ☐

REMARKS:

GEOLOGICAL WATER SURVEYS WATER WELL RECORD

10. Dept. Mines and Minerals permit No. 5350 Year 1968

11. Property owner Non-Responsive

Address Non-Responsive

Driller PS. NEELY License No. 70-268

12. Water from NIAGARAN LIME 13. County KANE

Formation
at depth 60 to 100 ft.

Sec. Non-Responsive

14. Screen: Diam. NONE in.

Twp. Non-Responsive

Length: ft. Slot

Rng. Non-Responsive

Elev. Non-Responsive

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
<u>5</u>	<u>R+D-TYC 1528</u>	<u>0</u>	<u>60</u>

SHOW
LOCATION IN
SECTION PLAT

16. Size Hole below casing: 5 in.

17. Static level 22 ft. below casing top which is 1 ft.
above ground level. Pumping level 25 ft. when pumping at 10
gpm for 3 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
<u>TOP SOIL</u>	<u>0</u>	<u>2</u>
<u>MIXED SANDY GRAVEL</u>	<u>2</u>	<u>60</u>
<u>NIAGARAN LIME</u>	<u>60</u>	<u>100</u>
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED

Richard Ornel DATE 10-22-68

White Copy -
Ill. Dept. of Health
Yellow Copy - Contractor
Blue Copy - Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUEST AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 616, 51 E OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

3

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well

- a. Aug. Bored. Hole Diam. 5 in. Depth 81 ft.
Curb material. Buried Slab: Yes ☐ No ☐
- b. Driven. Drive Pipe Diam. in. Depth ft.
- c. Drilled ☒ Finished in Drift In Rock ☒
Tubular Gravel Packed
- d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:

- Building 82 Ft. Seepage Tile Field 90'
Cess Pool Sewer (non Cast iron)
Privy Sewer (Cast iron)
Septic Tank 90' Barnyard
Leaching Pit Manure Pile

3. Is water from this well to be used for human consumption?

Yes ☒ No ☐

4. Date well completed July 1972

5. Permanent Pump Installed? Yes ☒ No ☐
Manufacturer Keda Type Submersible
Capacity 9 gpm. Depth of setting 1 ft.

6. Well Top Sealed? Yes ☒ No ☐

7. Pitless Adaptor Installed? Yes ☒ No ☐

8. Well Disinfected? Yes ☒ No ☐

9. Water Sample Submitted? Yes ☐ No ☒

REMARKS: Due to tank vandalism,
all energy piping between tank
and well was destroyed.

IDPH 1-6063

10/68

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Non-Responsive
Address Non-Responsive
Driller Harold N. Pohl License No. 100 1 10
11. Permit No. 18908 Date July 17, 1972
12. Water from Limestone Formation at depth 51 to 81 ft.
13. County Kane Sec. Non-Responsive
Twp. Non-Responsive
Rge. Non-Responsive
Elev. Non-Responsive
14. Screen: Diam. in. Length: ft. Slot
15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
<u>5"</u>	<u>AL Seamless 15#</u>	<u>0</u>	<u>51</u>

SHOW
LOCATION IN
SECTION PLAT
150'S 290'W
N 7/2 E SENE SW

16. Size Hole below casing: 5 in.
17. Static level 48 ft. below casing top which is 12" ft. above ground level. Pumping level 48 ft. when pumping at 9 gpm for 5 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH (Ft.)
<u>Top Soil</u>	<u>2'</u>	<u>2</u>
<u>yellow clay</u>	<u>3'</u>	<u>5</u>
<u>gray clay & gravel mixed</u>	<u>26'</u>	<u>31</u>
<u>blue clay</u>	<u>20'</u>	<u>51</u>
<u>limestone (Niagam) gray</u>	<u>30'</u>	<u>81</u>

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Harold N. Pohl DATE July 17, 1972

Farmer Home Well & Pump Service

White Copy -
Ill. Dept. of Public Health
Yellow Copy - Well Contractor
Blue Copy - Well Owner

INSTRUCTIONS TO DRILL

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE
DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST
JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER
SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well

- a. Dug _____ Bored _____ Hole Diam. _____ in. Depth _____ ft.
Curb material _____ Buried Slab: Yes _____ No _____
- b. Driven _____ Drive Pipe Diam. 5 in. Depth 125 ft.
- c. Drilled Yes Finished in Drift _____ In Rock Yes
Tubular _____ Gravel Packed _____
- d. Grout:

(KIND)	FROM (FT.)	TO (FT.)

2. Distance to Nearest

Building 45 Ft. Seepage Tile Field 100'
Cess Pool _____ Sewer (non Cast iron) _____
Privy _____ Sewer (Cast iron) _____
Septic Tank 75 Barnyard _____
Leaching Pit _____ Manure Pile _____

3. Well furnishes water for human consumption? Yes Yes No _____

4. Date well completed June 25

5. Permanent Pump Installed? Yes Yes Date _____ No _____

Manufacturer _____ Type _____ Location _____

Capacity _____ gpm. Depth of Setting _____ Ft.

6. Well Top Sealed? Yes Yes No _____ Type _____

7. Pitless Adapter Installed? Yes _____ No _____

Manufacturer _____ Model Number _____

How attached to casing? _____

8. Well Disinfected? Yes Yes No _____

9. Pump and Equipment Disinfected? Yes Yes No _____

10. Pressure Tank Size _____ gal. Type _____

Location _____

11. Water Sample Submitted? Yes _____ No Yes

REMARKS:

To my knowledge owner was
to submit water sample

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive

10. Property owner

Address Non-Responsive

Driller Bill Weirich JR. License No. 656811. Permit No. 94197 Date _____12. Water from Rock 13. County Kane

Formation

at depth _____ to _____ ft.

14. Screen: Diam. _____ in.

Length: _____ ft. Slot _____

Non-Responsive

Sec. _____

Twp. _____

Rge. _____

Elev. _____

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)

SHOW
LOCATION IN
SECTION PLAT
NW SE NE

16. Size Hole below casing: 5 in.

17. Static level 85 ft. below casing top which is 20 ft.
above ground level. Pumping level 100 ft. when pumping at 10
gpm for 24 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
<u>Drift</u>	<u>0-74</u>	
<u>Rock</u>	<u>74-125</u>	

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Bill Weirich JR. DATE July 10 - 80

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE
DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST
JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER
SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

5

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well

- a. Dug ☐ Bored ☐ Hole Diam. 5 in. Depth 140 ft.
Curb material ☐ Buried Slab: Yes ☐ No ☐
b. Driven ☐ Drive Pipe Diam. ☐ in. Depth ☐ ft.
c. Drilled ☒ Finished in Drift ☐ In Rock ☒
Tubular ☐ Gravel Packed ☐
d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
Outcrops	0	90

2. Distance to Nearest:

Building ☐ Ft. Seepage Tile Field 75'
Cess Pool ☐ Sewer (non Cast iron) ☐
Privy ☐ Sewer (Cast iron) ☐
Septic Tank 50' Barnyard ☐
Leaching Pit ☐ Manure Pile ☐

3. Well furnishes water for human consumption? Yes ☒ No ☐4. Date well completed AUGUST 7, 19815. Permanent Pump Installed? Yes ☒ Date 8-21-81 No ☐Manufacturer RED JACKET Type SUBM Location IN WELLCapacity 1 gpm. Depth of Setting 120 Ft.6. Well Top Sealed? Yes ☒ No ☐ Type CAPPED7. Pitless Adapter Installed? Yes ☒ No ☐Manufacturer WILLIAMS Model Number B50ACHow attached to casing? CLAMP ON8. Well Disinfected? Yes ☒ No ☐9. Pump and Equipment Disinfected? Yes ☒ No ☐10. Pressure Tank Size 25 gal. Type HYDRO PNEUMATICLocation BASEMENT11. Water Sample Submitted? Yes ☒ No ☐

REMARKS:

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner RICHMAR CONST. Well No. GE 32-400
Address 85 W 670 ST. CHARLES RD. - WHEATON, IL.
Driller Phil Kalerim License No. 102-84
11. Permit No. 100808 Date 8-5-81
12. Water from ROCK 13. County KANE
Formation
at depth ☐ to 140 ft. Sec. 13
14. Screen: Diam. ☐ in. Twp. 39N
Length: ☐ ft. Slot ☐ Rge. 8E
Elev. ☐

			X

SHOW
LOCATION IN
SECTION PLAT
E 8 E

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
<u>5"</u>	<u>#15 BLACK</u>	<u>0</u>	<u>90</u>

16. Size Hole below casing: 4 3/4 in.17. Static level 60 ft. below casing top which is 1 ft.
above ground level. Pumping level 80 ft. when pumping at 11
gpm for 4 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
<u>CLAY</u>	<u>0</u>	<u>80</u>
<u>SAND GRAVEL</u>	<u>80</u>	<u>90</u>
<u>ROCK</u>	<u>90</u>	<u>95</u>
<u>SHALE</u>	<u>95</u>	<u>100</u>
<u>ROCK</u>	<u>100</u>	<u>140</u>

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED

DATE

8-26-81

MUNICIPAL WELL LOGS FOR BATAVIA AND GENEVA

SOURCE: Woller, Dorothy, Ellis Sanderson, and Michael Sargent,
Public Groundwater Supplies in Kane County, 1986.

BATAVIA

The city of Batavia (8994) installed a public water supply in 1894. Three wells (Nos. 2, 3, and 4) are in use. This supply is cross connected with the city of Geneva and Geneva is also connected to the city of St. Charles. In 1949 there were 1737 services, all metered; the average daily pumpage was 550,000 gpd. In 1977 there were 3324 services, all metered; the average and maximum daily pumpages were 1,586,682 and 2,380,000 gpd, respectively. The water is chlorinated.

1 WELL NO. 1, open to the Silurian dolomite (lower part) and the Cambrian-Ordovician aquifer, was completed in 1895 to a depth of 1279 ft by the J. P. Miller Artesian Well Co., Brookfield. This well was abandoned and sealed in 1948. The well was located about 255 ft south of Wilson St. and 78 ft east of Island Ave., approximately 2000 ft S and 1700 ft W of the NE corner of Section 22, T39N, R8E. The land surface elevation at the well is approximately 665 ft.

The bore hole was reported to be 10 in., 8 in., and 4 in. in diameter with the length of each bore hole diameter unknown. The well was cased with 10-in. ID pipe to a depth of 40 ft and 6-in. liner pipe from 800 ft to a depth of 860 ft.

The well flowed upon completion.

In 1911, the pumping water levels below the top of the casing varied from 16 ft for the winter, spring, and fall months to 40 ft during the longer summer pumping periods. The production averaged 800 gpm in 1911 and 600 gpm in 1918 and 1945.

2 WELL NO. 2, open to the Cambrian-Ordovician and the Elmhurst-Mt. Simon aquifers, was constructed in 1915 to a depth of 2000 ft and deepened in 1945 to a reported depth of 2200 ft by the J. P. Miller Artesian Well Co., Brookfield. The well is located just east of the main pumping station, approximately 2050 ft S and 1680 ft W of the NE corner of Section 22, T39N, R8E. The land surface elevation at the well is approximately 667 ft.

A drillers log of Well No. 2 follows:

<i>Strata</i>	<i>Thickness (ft)</i>	<i>Depth (ft)</i>
Drift	6	6
Niagaran limestone	74	80
Maquoketa shale	50	130
Shale	90	220
Galena-Platteville	300	520
St. Peter sandstone	330	850
Sandstone	55	905
Dolomite, white pink	105	1010
Dolomite	90	1100
Galesville Sandstone	170	1270
Eau Claire Formation	390	1660
Mt. Simon Sandstone	340	2000
No record	15	2015
Sand, pink	20	2035
Sand, red	30	2065
Sand, pink	30	2095
No record	15	2110
Sand	20	2130
Sand, red	20	2150

Strata (continued)

	<i>Thickness (ft)</i>	<i>Depth (ft)</i>
Sand	20	2170
No record	5	2175
Sand, red	25	2200

After initial construction, it was reported in 1918 that the well produced 1143 gpm with a drawdown of 34 ft from a nonpumping water level of 6 ft.

In 1924, after pumping at a rate of 1143 gpm, the drawdown was 43 ft from a nonpumping water level of 40 ft.

Before rehabilitation in 1945, the well reportedly produced about 600 gpm with a drawdown of 19 ft from a nonpumping water level of 113 ft.

This well was rehabilitated by the J. P. Miller Artesian Well Co., during May to December 1945. Before work was started, the well was sounded and found filled to a depth of 1547 ft. After the old casing and liner were removed, the well was reamed to a larger diameter, drilled 200 ft deeper, and recased.

A 28-in. diameter hole was drilled to a depth of 50 ft, reduced to 24 in. between 50 and 234 ft, reduced to 19.2 in. between 234 and 940 ft, reduced to 15.2 in. between 940 and 1670 ft, and finished 12 in. in diameter from 1670 to 2200 ft. The well is cased with 26-in. OD pipe from land surface to a depth of 50 ft (cemented in), 20-in. pipe from land surface to a depth of 233 ft (cemented in), and a 16-in. liner from 790 ft to a depth of 940 ft. A 12-in. liner from 1260 ft to a depth of 1670 ft also was installed, but removed before the well was shot in October 1945.

After rehabilitation, a 24-hr production test was conducted on October 2-3, 1945, by representatives of the city, the driller, and the State Water Survey. The discharge was irregular during periods of the test and varied from 615 to 365 gpm. Well No. 3 was operated intermittently during the test. After breaking suction several times a constant rate of 475 gpm was established with a drawdown of 81 ft from a nonpumping water level of 126 ft when Well No. 3 was not in operation.

After this test the 12-in. liner between 1260 and 1670 ft was removed and the well was shot at depths of 1250, 1239, 1229, and 1224 ft. During this cleanout operation, a bridge was found at a depth of 1290 ft and no sand had fallen below that depth.

After shooting the well, a production test was conducted by the State Water Survey on November 30-December 1, 1945. After 24 hr of pumping at rates of 755 to 1430 gpm, the final drawdown was 81.5 ft from a nonpumping water level of 128.5 ft below the top of the casing. Well No. 3 was operated intermittently during the test.

On August 13, 1947, after a 4-hr idle period, the well reportedly produced 1350 gpm for 0.8 hr with a drawdown of 53 ft from a nonpumping water level of 145 ft below the pump base.

In January 1948, the nonpumping water level was reported to be 128 ft below the pump base.

In July 1948, after 2 hr of pumping at 1600 gpm, the pumping water level was 191 ft below the pump base.

Nonpumping water levels were reported to be 200 ft in January 1952 and 343 ft in July 1975.

The pumping equipment presently installed is a Byron Jackson submersible pump set at 503 ft, rated at 1300 gpm at about 350 ft head, and powered by a 200-hp electric motor. The well is equipped with 503 ft of airline.

A mineral analysis of a sample (Lab. No. 199252) collected July 17, 1975, after pumping for 45 min at 1050 gpm, showed the water to have a hardness of 234 mg/l, total dissolved minerals of 373 mg/l, and an iron content of 0.2 mg/l.

3 WELL NO. 3, open to the Cambrian-Ordovician and the Elmhurst-Mt. Simon aquifers, was completed in March 1941 to a depth of 2200 ft by the J. P. Miller Artesian Well Co., Brookfield. The well is located about 500 ft south of the main pumping station, approximately 2350 ft S and 1735 ft W of the NE corner of Section 22, T39N, R8E. The land surface elevation at the well is approximately 667 ft.

A sample study log of Well No. 3 furnished by the State Geological Survey follows:

Strata	Thickness (ft)	Depth (ft)
PLEISTOCENE SERIES		
Soil	1	1
SILURIAN SYSTEM		
Niagaran-Alexandrian Dolomite Series	69	70
ORDOVICIAN SYSTEM		
Maquoketa Group		
Dolomite	100	170
Shale	40	210
Galena-Platteville Dolomite Groups	314	524
Ancell Group		
Glenwood Sandstone, dolomitic	13	537
St. Peter Sandstone		
Sandstone	303	840
Shale	2	842
Prairie du Chien Group		
Oneota Dolomite, chert and some sandstone	78	920
CAMBRIAN SYSTEM		
Eminence-Potosi Dolomite, some shale at 945 ft	100	1020
Franconia Formation, some shale	85	1105
Ironton-Galesville Sandstone		
Sandstone, dolomitic	95	1200
Sandstone, incoherent, dolomitic		
from 1230 to 1250 ft	70	1270
Eau Claire Formation, shale, sandstone,		
siltstone, and dolomite	392	1662
Mt. Simon Sandstone	538	2200

A 24-in. diameter hole was drilled to a depth of 41.8 ft, reduced to 19.2 in. between 41.8 and 925 ft, reduced to 15.2 in. between 925 and 1606 ft, and finished 12.2 in. in diameter from 1606 to 2200 ft. The well is cased with 20-in. OD steel pipe from 1.8 ft above land surface to a depth of 41.8 ft (cemented in), 16-in. OD wrought iron pipe from land surface to a depth of 273.8 ft, 16-in. OD wrought iron liner from 765 ft to a depth of 866 ft, 13-in. OD wrought iron liner from 824 ft to a depth of 925 ft, and 13-in. OD wrought iron liner from 1250 ft to a depth of 1606 ft. The annulus

between the 20-in. and 16-in. casings is filled with bentonite. About 1967, it was reported that portions of the well casing-liners were removed and new casings installed. Details of this work are not available.

A production test was conducted on April 2-3, 1941. After 5 hr of pumping at rates of 1260 to 1210 gpm, the drawdown was 102.0 ft from a nonpumping water level of 90.5 ft. Pumping was continued for an additional 19 hr at rates of 1100 to 800 gpm with a final drawdown of 69 ft.

On October 3, 1945, the well reportedly produced 1060 gpm for 30 min with a drawdown of 65 ft from a nonpumping water level of 127 ft.

On August 13, 1947, after 45 min of pumping at a rate of 1250 gpm, the drawdown was 53 ft from a nonpumping water level of 135 ft below the pump base.

On July 9, 1948, the nonpumping water level was reported to be 124 ft below the pump base.

A production test was conducted by the Layne-Western Co., Aurora, on May 22, 1974. After 2.3 hr of pumping at rates of 760 to 869 gpm, the drawdown was 170 ft from a nonpumping water level of 250 ft. Pumping was continued for 4.5 hr with a final drawdown of 180 ft.

In July 1975, the nonpumping water level was reported to be 250 ft.

The pumping equipment presently installed is an Aurora turbine pump rated at 1000 gpm, and powered by a 150-hp 1750 rpm Westinghouse electric motor (No. 1S17N3905).

The following mineral analysis (Lab. No. 199253) is for a water sample from the well collected July 17, 1975, after 12 hr of pumping at 1000 gpm.

WELL NO. 3, LABORATORY NO. 199253

		mg/l	me/l.			mg/l	me/l
Iron (total)	Fe	0.3		Silica	SiO ₂	8.7	
Manganese	Mn	0.00		Fluoride	F	1.3	
Ammonium	NH ₄	0.3	0.02	Boron	B	0.2	
Sodium	Na	64.0	2.78	Nitrate	NO ₃	0.0	0.00
Potassium	K	11.2	0.29	Chloride	Cl	100	2.82
Calcium	Ca	63.2	3.15	Sulfate	SO ₄	30.0	0.62
Magnesium	Mg	24.0	1.97	Alkalinity(as	CaCO ₃)	232	4.64
Strontium	Sr	1.24	0.03				
				Hardness (as CaCO ₃)		256	5.12
Barium	Ba	<0.1					
Copper	Cu	0.00		Total dissolved			
Cadmium	Cd	0.00		minerals		459	
Chromium	Cr	0.00					
Lead	Pb	<0.05					
Lithium	Li	0.05		Turbidity	1		
Nickel	Ni	<0.05		Color	0		
Zinc	Zn	0.00		Odor	0		

4 WELL NO. 4, open to the Cambrian-Ordovician aquifer, was completed in March 1953 to a depth of 1357 ft (cleaned out to 1310 ft in 1976) by L. Cliff Neely, Batavia. The well is located on the eastern side of the Fox River at 434 East Wilson St., approximately 1650 ft S and 425 ft E of the NW corner of Section 23, T39N, R8E. The land surface elevation

at the well is approximately 721 ft.

A 26-in. diameter hole was drilled to a depth of 60 ft, reduced to 25 in. between 60 and 270 ft, reduced to 19.2 in. between 270 and 955 ft, and finished 16 in. in diameter from 955 to 1357 ft. The well is cased with 26-in. pipe from land surface to a depth of 60 ft, 19-in. pipe from land surface to a depth of 270 ft (cemented in), and a 16-in. liner from 840 ft to a depth of 955 ft (cemented in).

A production test was conducted by the driller on April 20, 1953. After 9 hr of pumping at a rate of 552 gpm, the drawdown was 110 ft from a nonpumping water level of 210 ft below land surface.

After the well was shot with 300 qt of nitroglycerin between depths of 1227 and 1321 ft, a production test was conducted on May 27-28, 1953, by representatives of the driller, the State Water Survey, and Wells Engineering Co. After 23.7 hr of pumping at rates ranging from 500 to 674 gpm, the drawdown was 53.0 ft from a nonpumping water level of 240.0 ft below the top of the casing. Fifty-two min after pumping was stopped, the water level had recovered to 246.5 ft.

In September 1958, the well reportedly produced 600 gpm for 24 hr with a drawdown of 20 ft from a nonpumping water level of 250 ft below the pump base.

In January 1976, this well was cleaned out by the Layne-Western Co., Aurora, to a depth of 1310 ft. A production test was conducted by the Layne-Western Co. on January 6,

1976. After 2.5 hr of pumping at rates of 887 to 1200 gpm, the drawdown was 79 ft from a nonpumping water level of 431 ft below land surface.

The pumping equipment presently installed consists of a 200-hp 1750 rpm Byron Jackson electric motor, a 12-in., 10-stage Byron Jackson submersible pump rated at 1100 gpm at about 620 ft TDH, and has 603 ft of 8-in. column pipe.

The following mineral analysis (Lab. No. 199254) is for a water sample from the well collected July 17, 1975, after 45 min of pumping at 1000 gpm.

WELL NO. 4, LABORATORY NO. 199254

		mg/l	me/l		mg/l	me/l	
Iron (total)	Fe	0.1		Silica	SiO ₂	6.7	
Manganese	Mn	0.00		Fluoride	F	1.1	
Ammonium	NH ₄	0.0	0.00	Boron	B	0.5	
Sodium	Na	32.3	1.41	Nitrate	NO ₃	1.9	0.03
Potassium	K	14.8	0.38	Chloride	Cl	6	0.17
Calcium	Ca	59.6	2.97	Sulfate	SO ₄	38.9	0.81
Magnesium	Mg	25.7	2.11	Alkalinity(as	CaCO ₃)	284	5.68
Strontium	Sr	2.6	0.06				
Barium	Ba	<0.1					
Copper	Cu	0.00		Hardness (as CaCO ₃)		254	5.08
Cadmium	Cd	0.00					
Chromium	Cr	0.00		Total dissolved			
Lead	Pb	<0.05		minerals		352	
Lithium	Li	0.04		Turbidity	0		
Nickel	Ni	<0.05		Color	0		
Zinc	Zn	0.02		Odor	0		

BURLINGTON

The Village of Burlington (456) installed a public water supply in 1943. One well (No. 2) is in use and another well (No. 1) is available for emergency use. In 1951 there were 84 services, all metered. In 1974 there were 167 services, 99 percent metered; the average and maximum daily pumpages were 73,530 and 110,000 gpd, respectively. The water is chlorinated, fluoridated, and treated with polyphosphate to keep iron in solution; the water from Well No. 1 is untreated.

WELL NO. 1, finished in sand and gravel was completed in July 1941 to a depth of 108.3 ft by Hayes & Sims, Champaign. This well is available for emergency use. The well is located in the rear of the main pumping station next to the firehouse on South St., approximately 1100 ft S and 100 ft W of the NE corner of Section 9, T41N, R6E. The land surface elevation at the well is approximately 925 ft.

A drillers log of Well No. 1 follows:

Strata	Thickness (ft)	Depth (ft)
Top soil	2	2
Yellow clay	13	15

Strata (continued)

	Thickness (ft)	Depth (ft)
Red clay	10	25
Clay with gravel showing	63	88
Gravel and sand with some clay showing	20	108

A 6-in. diameter hole was drilled to a depth of 108.3 ft. The well is cased with 6-in. pipe from 1.7 ft above land surface to a depth of about 95.3 ft and equipped with 14.7 ft of No. 35 slot Johnson Armco iron screen.

A production test was conducted by the State Water Survey on July 7, 1941. After 3.4 hr of intermittent pumping at rates ranging from 24 to 43 gpm, the drawdown was 5 ft from a nonpumping water level of 33 ft below land surface. Five min after pumping was stopped, the water level had recovered to 34 ft.

The pumping equipment presently installed consists of a 2-hp 1740 rpm General Electric motor, a 6-in., 4-stage Aurora turbine pump (No. 12504) rated at 50 gpm at about 57 ft head, and has 50 ft of 4-in. column pipe. A 10-ft section of 4-in. suction pipe is attached to the pump intake. The well is equipped with 50 ft of airline.

approximately 1300 ft N and 2200 ft W of the SE corner of Section 16, T40N, R7E.

WELL NO. 2, finished in sand and gravel, was completed in February 1975 to a depth of 186 ft by the K & K Well Drilling Co., Mokena. The well is located on Hidden Springs Drive, approximately 1820 ft N and 2150 ft W of the SE corner of Section 16, T40N, R7E. The land surface elevation at the well is approximately 850 ft.

A drillers log of Well No. 2 follows:

Strata	Thickness (ft)	Depth (ft)
Overburden to gravel	186	186

An 8-in. diameter hole was drilled to a depth of 186 ft. The well is cased with 8-in. black pipe from land surface to a depth of 166 ft followed by 20 ft of 8-in. No. 20 slot stainless steel screen. The top of the casing is equipped with a pitless adapter.

Upon completion, the well reportedly produced 285 gpm for 24 hr with a drawdown of 98 ft from a nonpumping water level of 69 ft below land surface.

The pumping equipment presently installed is a Barnes submersible pump set at 168 ft, rated at 285 gpm, and

powered by a 25-hp Barnes electric motor.

The following mineral analysis made by the Illinois Environmental Protection Agency (Lab. C008798) is for a water sample from the well collected May 12, 1975, after pumping at 240 gpm.

WELL NO. 2, LABORATORY NO. C008798

		mg/l	me/l		mg/l	me/l
Iron	Fe	1.3		Silica	SiO ₂	21.0
Manganese	Mn	0.02		Fluoride	F	0.8 0.04
Ammonium	NH ₄	0.62	0.03	Boron	B	0.3
Sodium	Na	32	1.39	Nitrate	NO ₃	0.4 0.01
Potassium	K	1.7	0.04	Chloride	Cl	3 0.08
Calcium	Ca	60	2.99	Sulfate	SO ₄	4 0.08
Magnesium	Mg	29	2.39	Alkalinity(as CaCO ₃)	348	6.96
Arsenic	As	0.000		Hardness (as CaCO ₃)	271	5.42
Barium	Ba	0.2		Total dissolved minerals	398	
Copper	Cu	0.00				
Cadmium	Cd	0.00				
Chromium	Cr	0.00				
Lead	Pb	0.00				
Mercury	Hg	0.0000		pH (as rec'd)	8.2	
Nickel	Ni	0.0		Radioactivity		
Selenium	Se	0.00		Alpha pc/l	2.0	
Silver	Ag	0.00		± deviation	1.3	
Cyanide	CN	0.00		Beta pc/l	3.2	
Zinc	Zn	0.80		± deviation	1.7	

GENEVA

The city of Geneva (9115) installed a public water supply in 1896. Four wells (Nos. 2, 3, 5, and 6) are in use. This supply is also cross connected with the cities of Batavia and St. Charles. In 1949 there were 1500 services, all metered; the average and maximum daily pumpages were 800,000 and 1,000,000 gpd, respectively. In 1974 there were 3038 services, all metered; the average and maximum daily pumpages were 1,756,468 and 2,600,000 gpd, respectively. The water is chlorinated and the water from Well Nos. 2 and 3 is also aerated.

WELL NO. 1, open to the Galena-Platteville dolomite and the Glenwood-St. Peter Sandstone, was completed in 1896 to a depth of 850 ft (reported in May 1928 to be 843 ft deep). This well was abandoned prior to 1948 and sealed prior to 1970. The well was located in the main pumping station about 45 ft south of State St. and 45 ft east of River St., approximately 1170 ft N and 590 ft W of the SE corner of Section 3, T39N, R8E. The land surface elevation at the well is approximately 679 ft.

The well was cased with 12-in. pipe to a depth of 8 ft, and the hole was finished 8 in. in diameter from 105 ft to the bottom. In May 1928, a 10-in. pipe was installed to a depth of 105 ft.

In 1922, the well reportedly produced 234 gpm with a drawdown of 21 ft from a nonpumping water level of 29 ft below land surface.

On August 14, 1947, the nonpumping water level was reported to be 1.2 ft below the pump base when Well No. 2 was idle.

A mineral analysis of a sample (Lab. No. 38886) collected January 30, 1918, showed the water to have a hardness of 237 mg/l, total dissolved minerals of 415 mg/l, and an iron content of 0.0 mg/l.

WELL NO. 2, open to the Cambrian-Ordovician and the Elmhurst-Mt. Simon aquifers, was constructed in 1924 to a depth of 1156 ft by the W. L. Thorne Co., Des Plaines, and deepened in 1928 to a reported depth of 2217 ft (cleaned out in 1962 to 2172 ft) by the J. P. Miller Artesian Well Co., Brookfield. The well is located behind the city hall about 150 ft south of the main pumping station, approximately 1000 ft N and 500 ft W of the SE corner of Section 3, T39N, R8E. The land surface elevation at the well is 677.89 ft.

A sample study log of Well No. 2 furnished by the State Geological Survey follows:

Strata	Thickness (ft)	Depth (ft)
No sample	4	4
SILURIAN SYSTEM		
"Block", dolomite, buff, and light gray, crystalline, gray, cherty in lower part	136	140
ORDOVICIAN SYSTEM		
Maquoketa Group		
Dolomite, argillaceous, brown; shale, dolomitic, gray	45	185
Shale, dolomitic, brown, with dolomite concretions	35	220
Galena Group		
Dolomite, buff	180	400
Platteville Group		
Dolomite, light buff, compact, fine to extra fine	130	530
Ancell Group		
St. Peter Sandstone		
Sandstone, light gray to buff, very fine to medium incoherent	300	830
Shale, sandy, red with white streaks	10	840
Conglomerate of sand, medium, and white chert pebbles	10	850
CAMBRIAN SYSTEM		
Eminence-Potosi Dolomite		
Dolomite, cherty, pink, light gray and white, geodic quartz, glauconitic	150	1000
Franconia Formation		
Shale, red and green; sandstone, red, fine; dolomite, gray, glauconitic	60	1060
Ironton-Galesville Sandstone		
Sandstone, white, fine to coarse, slightly dolomitic	160	1220
Eau Claire Formation		
Sandstone, dolomitic, grayish buff, very fine; shale, dolomitic, gray, glauconitic, green; dolomite, sandy, glauconitic, gray, all interbedded	410	1630
Mt. Simon Sandstone		
Sandstone, yellowish gray to pink to red, very fine to very coarse	587	2217

After the well was deepened in 1928, the hole was reported to be 12 in. in diameter to a depth of 1156 ft and 10 in. in diameter from 1156 to 2217 ft. In 1950 the hole was enlarged to 19 in. to a depth of 352 ft and in 1962 the hole was reamed out to 15 in. in diameter from 352 to 665 ft. The well was originally cased with 12-in. pipe to a depth of 224 ft. In April 1950, the 12-in. casing was removed and a 20-in. diameter surface pipe was placed from land surface to a depth of 6 ft and a 16-in. OD pipe was set from land surface to a depth of 352 ft (cemented in).

Upon completion, the well reportedly produced 300 gpm with a drawdown of 40 ft from a nonpumping water level of 60 ft below land surface.

In April 1925, the nonpumping water level was reported to be 62 ft below the top of the casing.

On March 4, 1926, after pumping at a rate of 171 gpm, the drawdown was 142 ft from a nonpumping water level of 66 ft.

After deepening in 1928, the well reportedly produced 525 gpm with a drawdown of 78 ft from a nonpumping water level of 50 ft below the top of the casing.

On November 10, 1937, the well reportedly produced 800 gpm with a drawdown of 109 ft from a nonpumping water level of 66 ft below land surface.

In January 1944, after pumping at a rate of 900 gpm, the average drawdown was 100 ft from a nonpumping water level of 96 ft below the pump base.

On August 14, 1947, after an idle period of 1 month, the nonpumping water level was reported to be 122 ft below the pump base.

On November 10, 1959, the nonpumping water level was reported to be 192 ft.

In 1962, the well was found bridged at 1562 ft. The hole was reamed from 352 to 665 ft, cleaned to 2172 ft, and then a caliper log was run. After this rehabilitation work, the well reportedly produced from 1067 to 1100 gpm for 3 hr with a drawdown of 235 ft from a nonpumping water level of 212 ft. Pumping was continued for an additional 7 hr at 857 gpm with a final drawdown of 183 ft.

In November 1970, the nonpumping water level was reported to be 284 ft.

In January 1971, the well reportedly produced 750 gpm with a drawdown of 190 ft from a nonpumping water level of 285 ft.

The pumping equipment presently installed consists of a 125-hp Byron Jackson electric motor, an 11-in., 10-stage Byron Jackson submersible pump set at 530 ft, rated at 700 gpm at about 570 ft TDH, and has 530 ft of 8-in. column pipe. The well is equipped with 530 ft of airline.

A mineral analysis made by the Illinois Environmental Protection Agency (Lab. No. C003862) of a sample collected November 26, 1973, after pumping for 3 hr at 750 gpm, showed the water to have a hardness of 223 mg/l, total dissolved minerals of 386 mg/l, and an iron content of 0.1 mg/l.

WELL NO. 3, presently open to the Cambrian-Ordovician aquifer, was constructed in March 1930 to a depth of 985 ft by William H. Cater, Chicago, and deepened in 1941 to a reported depth of 2300 ft (measured at 1241.4 ft in 1951) by the Gray Well Co., Chicago. The well is located in the northwest part of the city near the elevated tank at Logan and Center Sts., approximately 1000 ft S and 400 ft E of the NW corner of Section 3, T39N, R8E. The land surface elevation at the well is 758.6 ft.

A sample study log of Well No. 3 furnished by the State Geological Survey follows:

Strata	Thickness (ft)	Depth (ft)
PLEISTOCENE SERIES		
Glacial drift	60	60
SILURIAN SYSTEM		
Niagaran and Alexandrian dolomites	150	210
ORDOVICIAN SYSTEM		
Maquoketa Group, shale and dolomite	95	305
Galena-Platteville Dolomite Groups	335	640
Ancell Group		
Glenwood Formation, dolomitic sandstone	45	685
St. Peter Sandstone		
Sandstone, incoherent	402	1087
Conglomerate, sandstone	23	1110
CAMBRIAN SYSTEM		
Franconia Formation, dolomite, sandstone and shale	50	1160

<i>Strata (continued)</i>	<i>Thickness (ft)</i>	<i>Depth (ft)</i>
Ironton Sandstone, partly colomitic	70	1230
Galesville Sandstone	95	1325
Eau Claire Formation, shale, sandstone and dolomite	390	1715
Mt. Simon Sandstone	585	2300

A 19-in. diameter hole was drilled to a depth of 978 ft. When the well was deepened in 1941, a 15-in. diameter hole was drilled from 978 to 1715 ft and finished 12 in. in diameter from 1715 to 2300 ft. Initially, the well was cased with 20-in. OD wrought iron pipe from land surface to a depth of 65 ft. In March 1931, a 16-in. OD liner was installed from 200 ft to to a depth of 300 ft. Between June and September 1940, the 16-in. liner was removed and a 16-in. OD pipe was installed from land surface to a depth of 320 ft. After deepening this well, a 10-in. liner was set from 1576 ft to a depth of 1715 ft. In 1946 the 16-in. casing was removed and replaced with 16-in. OD casing from land surface to a depth of 338.6 ft (cemented in) and a 16-in. OD perforated liner was set on drive shoes (top and bottom) from 810 ft to a depth of 995 ft. This liner had approximately 40 ft of 1-ft by ¼-in. slots cut with a torch in 4 rows equally spaced around the pipe but staggered in the vertical direction.

On March 13-16, 1930, after pumping at rates of 400, 500, and 620 gpm, the drawdowns were 176.2, 211.2, and 256.2 ft from a nonpumping water level of 48.8 ft below land surface.

On November 20, 1930, the well reportedly produced 500 gpm with a drawdown of 224 ft from a nonpumping water level of 62 ft below the pump base.

On December 3, 1937, the nonpumping water level was reported to be 127 ft.

On March 12, 1940, the well reportedly produced 300 gpm with a drawdown of 103 ft from a nonpumping water level of 135 ft.

Between June and September 1940, the Gray Well Co. removed the 16-in. liner and shot the well with 250 lb of 80 percent blasting gelatin at a depth of 975 ft and with 175 lb at 969 ft. After the second shot a measurement showed a bridge at 960 ft. Ten charges varying from 100 to 250 lb were exploded between 820 and 960 ft. A new 16-in. casing was installed and about 80 cubic yards of sand was removed from the shot zone. After this work was completed a production test was conducted on September 21-23, 1940. After 56 hr of pumping at rates of 250 to 500 gpm, the drawdown was 234 ft from a nonpumping water level of 92 ft below the pump base. Pumping was continued for an additional 3 hr at a rate of 525 gpm with a final drawdown of 250 ft. Since the shooting and developing did not succeed in restoring the well to a greater capacity, the well was drilled to a greater depth.

After the well was deepened in 1941, a production test was conducted on December 22-23, 1941. After 4 hr of pumping at a rate of 1150 gpm, the drawdown was 213 ft from a nonpumping water level of 87 ft below the pump base.

Pumping was continued for an additional 40 hr at a rate of 1120 gpm with a final drawdown of 225 ft. Considerable sand was pumped during the first part of the test and the well did not clear up until after 32 hr of pumping. On removal of the test pump, the well was found filled to 933 ft. Approximately 100 cubic yards of sand was bailed from January 12 to May 5, 1942, and at that time the well had been cleaned out to a depth of 1301 ft.

On May 12-13, 1942, the well reportedly produced 500 gpm for 36 hr with a drawdown of 200 ft from a nonpumping water level of 92 ft below the pump base.

On September 17, 1942, after an idle period of 12.5 hr, the well reportedly produced 480 gpm for 6.5 hr with a drawdown of 179 ft from a nonpumping water level of 141 ft below land surface.

In April 1944, holes were found in the 16-in. casing and the well bridged at a depth of 972 ft.

In March 1946, S. B. Geiger & Co., Chicago, started rehabilitating the well. On March 25, 1946, the nonpumping water level was 135 ft and the hole bridged at 970 ft below the pumphouse floor. The 16-in. casing was removed and the hole cleaned to a depth of 1410 ft. A 16-in. liner was temporarily set between depths of 741 and 1003 ft and 1400 lbs of 100 percent blasting gelatin was exploded at 6 levels between 1235 and 1335 ft. The shooting backfilled the hole to 1300 ft and the hole was cleaned out to 2300 ft. A new 16-in. casing at land surface and a 16-in. perforated liner were installed.

After rehabilitation, a production test was conducted on September 5-6, 1946, by representatives of the city, S. B. Geiger & Co., and the State Water Survey. After 20.8 hr of pumping at rates ranging from 755 to 1255 gpm, the final drawdown was 105 ft from a nonpumping water level of 204 ft below the top of the casing. One hr after pumping was stopped, the water level had recovered to 228 ft. When the test pump was removed, the hole was found bridged at a depth of 1278 ft and was then cleaned out to 1540 ft where hard material was encountered. Drilling was stopped at 1576 ft on October 27, 1946.

On July 28, 1947, after a 36-hr idle period, the nonpumping water level was reported to be 212 ft below the pump base.

On October 30, 1951, the well was measured at 1241.4 ft deep and the nonpumping water level was reported to be 234.2 ft.

On June 16, 1954, the well reportedly produced 550 gpm with a drawdown of 54 ft from a nonpumping water level of 256 ft.

The pumping equipment presently installed is a Byron Jackson submersible pump set at 525 ft, rated at 500 gpm at about 524 ft head, and powered by a 125-hp Byron Jackson electric motor.

A mineral analysis made by the Illinois Environmental Protection Agency (Lab. No. C003809) of a sample collected November 26, 1973, after pumping for 9 hr at 400 gpm, showed

the water to have a hardness of 244 mg/l, total dissolved minerals of 334 mg/l, and an iron content of 0.1 mg/l.

WELL NO. 4, presently open to the Iron-ton-Galesville Sandstone of the Cambrian-Ordovician aquifer and the Elmhurst-Mt. Simon aquifer, was completed in June 1944 to a depth of 2267 ft by the S. B. Geiger & Co., Chicago. This well has not been used since 1973 and rehabilitation is scheduled for 1977. The well is located in the rear of the city hall near First and James Sts., approximately 1150 ft N and 1250 ft W of the SE corner of Section 3, T39N, R8E. The land surface elevation at the well is 719.14 ft.

A sample study log of Well No. 4 furnished by the State Geological Survey follows:

Strata	Thickness (ft)	Depth (ft)
PLEISTOCENE SERIES		
Silt and sand	5	5
Gravel, clean	29	34
SILURIAN SYSTEM		
Niagaran-Alexandrian dolomites	71	105
ORDOVICIAN SYSTEM		
Maquoketa Group, dolomite and shale	135	240
Galena-Platteville Dolomite Groups	340	580
Ancell Group		
Glenwood Formation, sandstone and dolomite	5	585
St. Peter Sandstone		
Sandstone, some shale	338	923
Conglomerate of sandstone, chert, shale, and dolomite	169	1092
CAMBRIAN SYSTEM		
Franconia Formation, sandstone, dolomite, and shale	30	1122
Iron-ton-Galesville Sandstone		
Sandstone, partly dolomitic, some shale	161	1283
Eau Claire Formation, shale, dolomite, sandstone, and limestone, interbedded	392	1675
Mt. Simon Sandstone	592	2267

A 24-in. diameter hole was drilled to a depth of 55.3 ft, reduced to 22 in. between 55.3 and 275 ft, reduced to 19.2 in. between 275 and 1116 ft, reduced to 16 in. between 1116 and 1687 ft, and finished 12 in. in diameter from 1687 to 2267 ft. The well is cased with 24-in. OD pipe from land surface to a depth of 55.3 ft, 20-in. pipe from land surface to a depth of 275 ft (sealed with bentonite), 16-in. liner from 275 ft to a depth of 1116 ft, and 12-in. liner from 1116 ft to a depth of 1687 ft. In 1964 a 16-in. pipe was installed from land surface to a depth of 934 ft, 10-in. pipe from 934 ft to a depth of 944 ft, and 12-in. ID pipe from 944 ft to a depth of 1125 ft. The annular opening between the casing, liners, and bore hole is filled with cement.

A production test was conducted on June 26-27, 1944. After 24.3 hr of pumping at rates of 1050 to 985 gpm, the drawdown was 172.0 ft from a nonpumping water level of 138.0 ft below the top of the casing. Forty-five min after pumping was stopped, the water level had recovered to 168.0 ft. During the test Well No. 2, 765 ft southeast, was pumping intermittently.

On July 18, 1945, the well reportedly produced 950 gpm for 5 hr with a drawdown of 172 ft from a nonpumping water

level of 130 ft below the pumphouse floor.

On July 30, 1947, the nonpumping water level was reported to be 137 ft.

In January 1954, Dowell, Inc. removed the pump and shot the well in the Iron-ton-Galesville Sandstone using the directional method. The well was then acidized with 2000 gal of 28 percent HCl and the pump was replaced. On March 19, 1954, the well reportedly produced 940 gpm for 28 hr with a drawdown of 135 ft from a nonpumping water level of 205 ft.

In 1964 the well was reamed and shot with about 8 charges of 50 lb nitroglycerin from 1150 to 1275 ft and the new casing was installed.

Between 1968 and 1970 because of reduced production, the well was shot twice with prima cord. The well delivered 650 gpm when returned to service.

In 1970, the nonpumping water level was reported to be 360 ft.

The pumping equipment presently installed consists of a 150-hp U.S. electric motor, a 12-in., 10-stage Aurora turbine pump (No. 24624) set at 520 ft, rated at 700 gpm, and has 520 ft of column pipe. A 30-ft section of 10-in. suction pipe is attached to the pump intake. The well is equipped with 520 ft of airline.

A mineral analysis made by the Illinois Environmental Protection Agency (Lab. No. C003805) of a sample collected November 26, 1973, after pumping for 1 hr at 300 gpm, showed the water to have a hardness of 216 mg/l, total dissolved minerals of 318 mg/l, and an iron content of 0.5 mg/l.

7 WELL NO. 5, open to the Cambrian-Ordovician and the Elmhurst-Mt. Simon aquifers, was completed in February 1957 to a depth of 2292 ft by L. Cliff Neely, Batavia. The well is located near East Side Drive on Dodson St., approximately 1690 ft N and 2390 ft W of the SE corner of Section 2, T39N, R8E. The land surface elevation at the well is approximately 753 ft.

A drillers log of Well No. 5 follows:

Strata	Thickness (ft)	Depth (ft)
Glacial drift	64	64
Lime	187	251
Maquoketa shale	39	290
Lime	110	400
Sandy lime	22	422
Broken conglomerate	16	438
Lime	8	446
Shale and lime	25	471
Lime	97	568
Shale	2	570
Lime	49	619
Sand	266	885
Red rock	4	889
Lime	10	899
Sand	25	924
Lime	182	1106
Shale	22	1128
Sand	3	1131
Shale	2	1133
Sand	12	1145

Strata (continued)	Thickness (ft)	Depth (ft)
Shale	22	1167
Sand	175	1342
Shale	5	1347
Sandy shale	11	1358
Sand	6	1364
Shale	83	1447
Red shale	26	1473
Shale	34	1507
Sandy lime	8	1515
Sand hard	24	1539
Sandy lime	32	1571
Sand	11	1582
Lime	62	1644
Shale	21	1665
Lime	14	1679
Lime and shale	11	1690
Sand	10	1700
Lime	9	1709
Shale	6	1715
Lime	10	1725
Sandy lime	9	1734
Sand	11	1745
Brown sand	34	1779
Sand	87	1866
Lime	19	1885
Sand	38	1923
Red shale	7	1930
Sand	12	1942
Sand and shale	20	1962
Sand	16	1978
Red shale	14	1992
Red sand and shale	58	2050
Sand, white	148	2198
Red shale	7	2205
Sand	87	2292

A 26-in. diameter hole was drilled to a depth of 64 ft, reduced to 25 in. between 64 and 302 ft, reduced to 19 in. between 302 and 1135 ft, reduced to 15.2 in. between 1135 and 1555 ft, and finished 12 in. in diameter from 1555 to 2292 ft. The well is cased with 26-in. pipe from 2 ft above land surface to a depth of 64 ft, 20-in. pipe from 2 ft above land surface to a depth of 302 ft (cemented in), 18-in. liner from 397 ft to a depth of 500 ft (cemented in), 16-in. liner from 875 ft to a depth of 1135 ft, and 12-in. liner from 1335 ft to a depth of 1555 ft.

A production test was conducted on March 1-2, 1957, by representatives of the driller, the city, the State Water Survey, and Baxter and Woodman, Engineers. After 23.2 hr of pumping at rates of 1012 to 1078 gpm, the drawdown was 150 ft from a nonpumping water level of 234 ft below land surface. Pumping was continued at a rate of 1280 gpm for 1 hr with a final drawdown of 169 ft. Twenty-three min after pumping was stopped, the water level had recovered to 283 ft.

On May 23, 1958, the nonpumping water level was reported to be 247.3 ft below the top of the casing.

On September 10, 1971, the well reportedly produced 900 gpm with a drawdown of 70 ft from a nonpumping water level of 400 ft.

The pumping equipment presently installed consists of a 200-hp 1750 rpm Byron Jackson electric motor, a 12-in., 9-stage Byron Jackson submersible pump (No. 341806) set at 510 ft, rated at 1000 gpm at about 486 ft TDH, and has

510 ft of 8-in. column pipe. The well is equipped with 510 ft of airline.

The following mineral analysis made by the Illinois Environmental Protection Agency (Lab. No. 03723) is for a water sample from the well collected January 18, 1972, after 1.5 hr of pumping at 875 gpm.

WELL NO. 5, LABORATORY NO. 03723

	mg/l	me/l		mg/l	me/l
Iron	Fe	0.0	Silica	SiO ₂	7.5
Manganese	Mn	0.0	Fluoride	F	1.6 0.08
Ammonium	NH ₄	0.5 0.03	Boron	B	0.35
Sodium	Na	34.4 1.50	Nitrate	NO ₃	0.0
Potassium	K	11.3 0.29	Chloride	Cl	35 0.99
Calcium	Ca	53 2.64	Sulfate	SO ₄	24 0.50
Magnesium	Mg	22 1.81	Alkalinity (as CaCO ₃)		236 4.72
Barium	Ba	0.0	Hardness (as CaCO ₃)		220
Copper	Cu	0.0	Total dissolved		
Cadmium	Cd	0.00	minerals		335
Chromium	Cr	0.0	pH (as rec'd)		7.2
Lead	Pb	0.01	Radioactivity		
Mercury	Hg	<0.0005	Alpha pc/l		6
Nickel	Ni	0.0	± deviation		2
Silver	Ag	0.0	Beta pc/l		14
Zinc	Zn	0.0	± deviation		2

8 WELL NO. 6, open to the Iron-ton-Galesville Sandstone of the Cambrian-Ordovician aquifer, was completed in June 1964 to a depth of 1350 ft by the Milaeger Well and Pump Co., Brookfield, Wis. The well is located east of Randall Road south of South St., approximately 80 ft S and 150 ft E of the NW corner of Section 9, T39N, R8E. The land surface elevation at the well is approximately 755 ft.

A drillers log of Well No. 6 follows:

Strata	Thickness (ft)	Depth (ft)
Glacial drift	100	100
Limestone	467	567
Brown lime	39	606
Sand, white	394	1000
Lime	17	1017
Lime, with shale streaks	84	1101
Red sand	3	1104
Sandy lime	46	1150
Sand	120	1270
Lime, sandy	63	1333
Lime, shale streaks	17	1350

A 26-in. diameter hole was drilled to a depth of 90 ft, reduced to 25 in. between 90 and 500 ft, reduced to 24 in. between 500 and 1140 ft, and finished 19 in. in diameter from 1140 to 1350 ft. The well is cased with 26-in. pipe from 1 ft above land surface to a depth of 90 ft and 20-in. pipe from 1 ft above land surface to a depth of 1140 ft (cemented in). The top of the well casing is equipped with a pitless adapter.

After the well was shot with eight 50-lb shots of 80 percent nitro at 12-ft intervals, a production test was conducted

on June 23, 1964, by representatives of the driller and the Wells Engineering Co. After 14.5 hr of pumping at rates ranging from 270 to 979 gpm, the drawdown was 166 ft from a nonpumping water level of 306 ft below land surface.

The pumping equipment presently installed is a Byron Jackson submersible pump set at 640 ft, rated at 1000 gpm, and powered by a 250-hp Byron Jackson electric motor.

The following mineral analysis made by the Illinois Environmental Protection Agency (Lab. No. 03725) is for a water sample from the well collected January 18, 1972, after 1.5 hr of pumping at 900 gpm.

WELL NO. 6, LABORATORY NO. 03725

		mg/l	me/l			mg/l	me/l
Iron	Fe	0.0		Silica	SiO ₂	7.5	
Manganese	Mn	0.0		Fluoride	F	0.8	0.04
Ammonium	NH ₄	0.7	0.04	Boron	B	0.25	
Sodium	Na	13	0.57	Nitrate	NO ₃	0.0	
Potassium	K	10.4	0.27	Chloride	Cl	3.8	0.11
Calcium	Ca	59	2.94	Sulfate	SO ₄	9	0.19
Magnesium	Mg	26	2.14	Alkalinity (as CaCO ₃)		284	5.68
				Hardness (as CaCO ₃)		256	
Barium	Ba	0.5		Total dissolved minerals		304	
Copper	Cu	0.0		pH (as rec'd)		7.0	
Cadmium	Cd	0.00		Radioactivity			
Chromium	Cr	0.0		Alpha pc/l		6	
Lead	Pb	0.00		± deviation		2	
Mercury	Hg	<0.0005		Beta pc/l		17	
Nickel	Ni	0.0		± deviation		3	
Silver	Ag	0.0					
Zinc	Zn	0.0					

HAMPSHIRE

The village of Hampshire (1611) installed a public water supply in 1902. One well (No. 5) is in use and two wells (Nos. 3 and 4) are available for emergency use. In 1951 there were 280 services, 90 percent metered; the estimated average daily pumpage was 45,000 gpd. In 1974 there were 550 services, all metered; the average and maximum daily pumpages were 200,000 and 300,000 gpd, respectively. The water from Well No. 5 is chlorinated, fluoridated, and treated with polyphosphate to keep iron in solution; the water from Well Nos. 3 and 4 is untreated.

WELL NO. 1, finished in sand and gravel, was completed in 1902 to a depth of 72 ft. This well was abandoned and capped in 1952. The well is located about 60 ft west of State St. and 60 ft south of Jefferson St., approximately 650 ft N and 100 ft W of the SE corner of Section 21, T42N, R6E. The land surface elevation at the well is approximately 900 ft.

The well is cased with 6-in. pipe.

In April 1922, the nonpumping water level was reported to be 35 ft below the pump base.

A mineral analysis of a sample (Lab. No. 47403) collected April 20, 1922, showed the water to have a hardness of 343 mg/l, total dissolved minerals of 388 mg/l, and an iron content of 0.1 mg/l.

WELL NO. 2, open to the Maquoketa Group and the Galena-Platteville dolomite, was completed in 1924 to a depth of 1180 ft (later plugged to 400 ft) by P. E. Millis, Byron. This well was abandoned and capped in 1952. The well is located southwest of Well No. 1, approximately 600 ft N and 200 ft W of the SE corner of Section 21, T42N, R6E. The land surface elevation at the well is approximately 900 ft.

A correlated drillers log of Well No. 2 furnished by the State Geological Survey follows:

Strata	Thickness (ft)	Depth (ft)
PLEISTOCENE SERIES		
Clay	60	60
Gravel	10	70
Clay	106	176
ORDOVICIAN SYSTEM		
Maquoketa Group		
Lime rock	64	240
Shale, dark	40	280
Galena-Platteville Groups		
Lime rock	330	610
Ancell Group		
St. Peter Sandstone	210	820
CAMBRIAN SYSTEM		
Eminence-Potosi Dolomite		
Lime rock	50	870
Franconia Formation		
Red marl	20	890
Lime rock	80	970
Eau Claire Formation		
Sand Potsdam	210	1180

A 10-in. diameter hole was drilled to a depth of 178 ft and finished 8 in. in diameter from 178 to 1180 ft. The well is cased with 10-in. pipe to a depth of 178 ft. This well was plugged to a depth of 400 ft and shot at a depth of about 300 ft.

Upon completion, the well reportedly produced 120 gpm for 6 hr and the nonpumping water level was 42 ft below land surface.

On May 18, 1938, after the well was plugged, the nonpumping water level was reported to be 25 ft below the pump base.

On August 6, 1947, after 15 min of pumping at a rate of 125 gpm, the drawdown was 4.5 ft from a nonpumping water level of 45.5 ft below the pump base.

A mineral analysis of a sample (Lab. No. 111401) collected August 6, 1947, after pumping for 15 min at 125 gpm, showed the water to have a hardness of 176 mg/l, total dissolved minerals of 302 mg/l, and an iron content of 0.4 mg/l. Hydrogen